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Indian Cricketer

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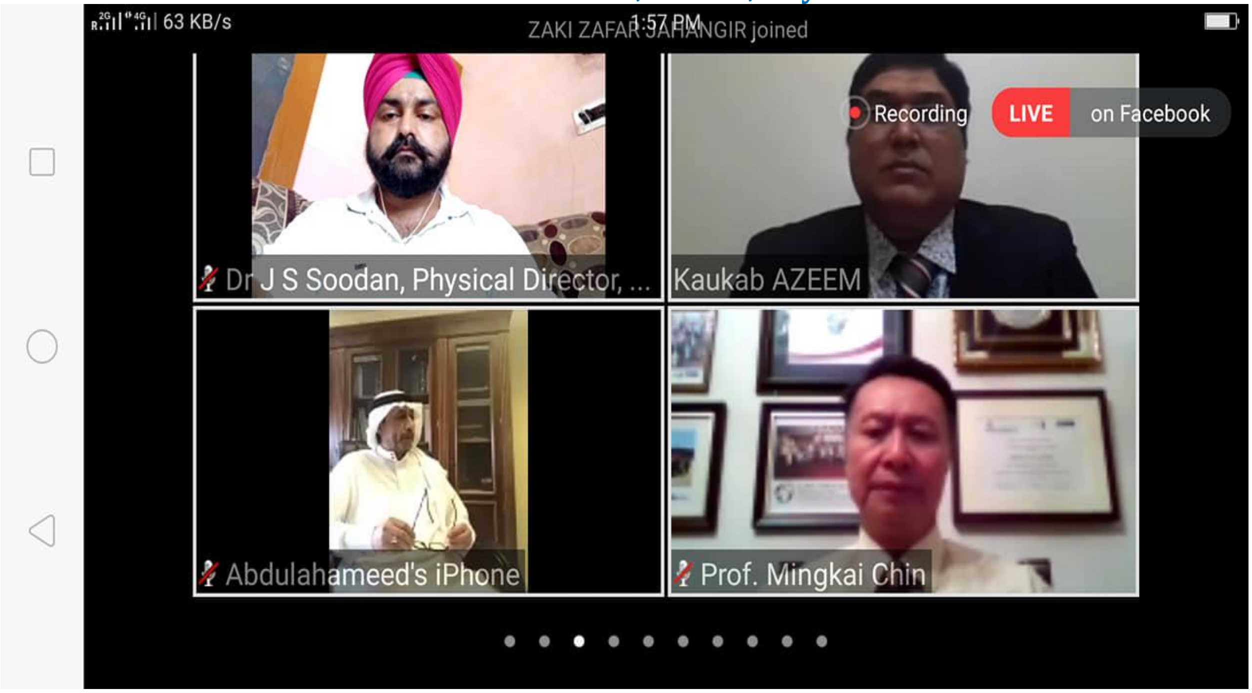

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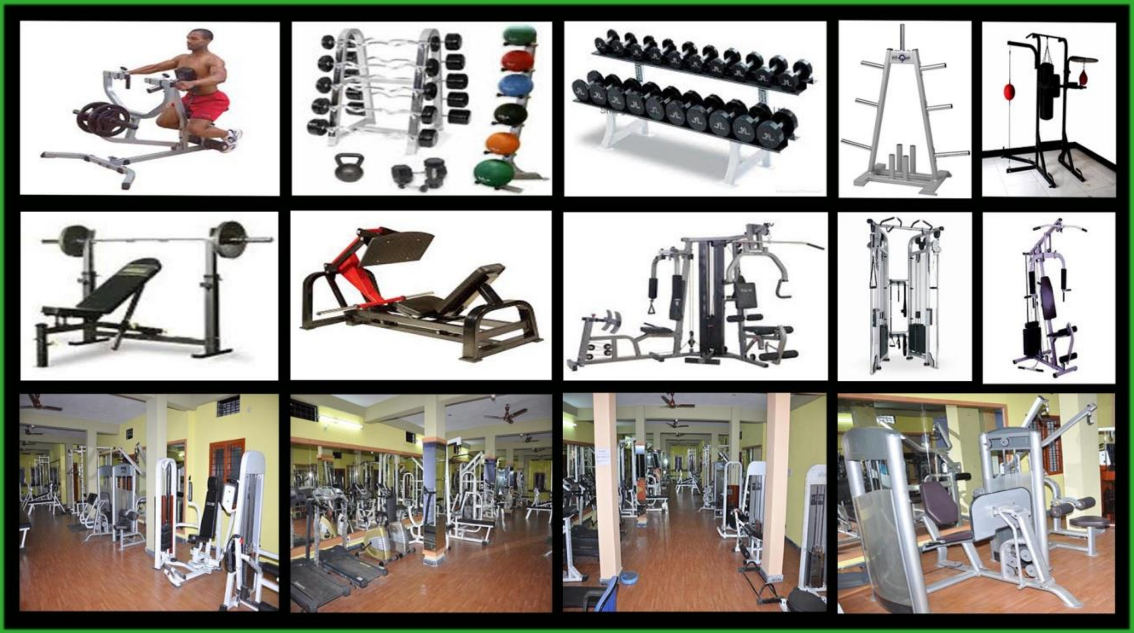

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Irfan Pathan (Icon of Indian Cricket): A Journey of a Champion

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Irfan Pathan is an Indian cricketer, born in Baroda, Gujarat on 27 October 1984. He is a left-handed batsman and a left-arm medium fast bowler. Primarily a bowler, he often helped put some great knocks with the bat down the order. He is one of the icon of Indian cricket and most handsome cricketer.

Background

He grew up with his brother Yusuf and sister Shagufta in Jumma masjid in Vadodara, in an impoverished family. His father served as the muezzin. Irfan did his schooling in O.L.Pandya School in Baroda upto 7 th standard but as the school did not have any sports facilities, he shifted to H.V.Shroff High School Baroda and studied there for one year but the school also did not supported him for sports so he finally shifted to M.E.S School, Nagarwada Baroda which had a school cricket team. He studied upto 10th std and could not study further due to cricket assignments. His father took both Irfan and Yusuf Pathan to Baroda Sports Club jointly run by Mr. Mehandi Shaikh and Mr. Bashir Shaikh. Mr. Mehandi Shaikh is an Ex Ranji Trophy player and a well known coach in Baroda and his colleague Mr. Bashir Shaikh, who was also a renowned coach. 146 Their first local tournament was Under -12 Railway Tournament where both the brothers yielded success where there team Baroda Sports Club became the Champion, Yusuf was awarded the Man of the Series and Irfan was awarded the Best Bowler Prize. Pathan rose to get selected in the Under-14 Baroda cricket team, and when he was selected at Under15 level to represent Baroda in a national tournament, he was finally presented with a full set of cricket equipment, having before been restricted to second-hand gear due to his family's limited economic means. In December 1997, Pathan broke into the Baroda Under-16 team, less than two months after turning 13. He took a total of 1/35 and scored 1 and 11 against Gujarat and was dropped immediately afterwards. He did not play again for the Under-16s for two years, and in November 1999, less than a month after turning 15; he made his next appearance, this time for Baroda Under-19s against Maharashtra. He scored 61 and 9 and took a total of 3/41 in a victory, but was immediately dropped back to the Under-16s for the next match, and spent the rest of the 1999–2000 season there. He bowled short spells in the younger division, taking four wickets at 38.00 in six matches, averaging less than seven overs an innings. He had more success with the bat, scoring 253 runs at 31.62 including a best of 72 against Mumbai. 147 Pathan was then selected for the India Under-15 team in mid-2000 to play a series of matches against their colleagues from other countries. He took 15 wickets at 12.66 in ten matches, including a best of 3/2 against Thailand, and scored 15 runs at 7.50. India won all but one of the matches, most by enormous margins. At the start of the 2000–01 season, Pathan was immediately back in the Under-19s, this time bowling more, often delivering more than 20 overs per innings. In four matches, he scored 102 runs at 102.00 including a best of 63 not out, and took 10 wickets at 32.50. He was then promoted to the Under-22s, where he scored 44 and took 4/71 in his first match against Saurashtra, prompting the Baroda selectors to propel him into the senior team. In 2003 he was selected for the India A team which travelled to England. Playing in five first-class matches, Pathan took nine wickets at 43.77, including 4/60 against Yorkshire and 3/83 against South Africa. He represented Baroda in U-14, U-15, U-16 and U-19 teams well below the age limit. He also played for India U-15. He was brilliant with both bat and the ball and his performances kept getting better.

He was then given a chance in the U-22 team. He returned with figures of 4/71 and scored 44 against Saurashtra. This performance made the selectors elevate him to the India Emerging Players squad.

Debut

Irfan made his international debut in a Test match against Australia on 12 December 2003 in Adelaide. It did not go well for him as he took 1/160 and scored only 1 run in the match. He was dropped in the next match.. In the ODI tri-nation tournament against Australia and Zimbabwe that followed, Pathan was the leading wicket-taker with 16 wickets at an average of 31 in his maiden ODI series. He got his first Man of the Match for his brilliant figures of 4/24 against Zimbabwe. His ability to swing the ball both ways and his innings in Lahore led to speculation that he could become an all rounder. In recognition of his 148 performances at the start of his international career, Pathan was named the **ICC Emerging Player of the Year in 2004**. He was noticed in junior cricket at a very young age of 13 years

He again got a chance two test matches later, but again he failed to impress with figures of 3/106 in the match.

Rise to glory

He piled on a few records to his name. In 2005, in a two-Test series against Zimbabwe, he picked up 21 wickets and became only the third bowler in the world to do so. By the time, his batting was also coming to the fore as he was promoted up the order and scored a few half centuries batting at no. 3.

His quick fire innings of 83 runs against Sri Lanka proved to be the catalyst for India to score 350. He also took 4/37 and 3/38 in other matches of the series and got two Man of the Match awards.

He also performed in both the departments in Test cricket. His then-Test-best score of 93 runs again came against Sri Lanka and set up the match for India. His fifties in Test cricket were like bonus for the team.

In 2006, he got an A-grade contract by the BCCI and was also being compared to the all-time legend all-rounder Kapil Dev.

He then was part of the ICC T20 World Cup winning squad in 2007. He was one of the senior players of the young team.

Low points

Since the World T20 win, his performance did not remain consistent. He was in and out of the team. His talent and skills forced the selectors to call him back, but his poor form kept him out of the team again and again.

He made a few comebacks to the Indian team but none of them lasted long. His domestic performances were also not so great. He last played for the national team in a T20 against South Africa in 2012. He has failed to make a comeback since then.

Club career

He has played for the English county Middlesex in 2005. Apart from that, he has played only the IPL.

In 2008, since the inception of IPL, he played for the Kings XI Punjab for three years. Later, he switched teams and played for the Delhi Daredevils for another three years.

His performances were not upto the mark in IPL as well. Due to this, he had to keep changing his teams every year since then. He played for the Sunrisers Hyderabad in 2014, Chennai Super Kings in 2015, Rising Pune Supergiants in 2016 and Gujarat Lions in 2017.

Records

- **Irfan Pathan is the only bowler to take a hat-trick in the first over of a Test match. He is the fastest Indian bowler to 100 ODI wickets (59 matches, Next best: 65 matches by Zaheer Khan).**
- **He also holds the record for the fastest ODI double of 1000 runs and 100 wickets (1059 days).**
- **In 29 Test matches, he has amassed 1105 runs at an average of 31.57. He has six fifties and one century to his name. In addition, he has taken exactly 100 Test wickets at an average of 32.26. His best bowling figures are 7/59.**
- **He has 1544 ODI runs under his belt at an average of 23.39 in 120 matches. He has 5 fifties in ODI cricket. He also has 173 wickets at 29.72 with 5/27 being his best.**
- **He has played 24 T20Is and scored 172 runs. He has taken 28 wickets at an average of 22.07 and economy rate of 8.02.**

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WINNING GOLD IN OLYMPIC GAMES

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"It is not the strongest of species that survives nor the most intelligent, but the one who is most responsive to change" Charles Darwin.

1.**Genesis:** The Union Cabinet chaired by the Hon'ble Prime Minister of India approved the National University Games Scheme with full cost to the Central Government in the year:2019. This is an important policy decision, with a special focus on promoting sports, keeping the youth at the centre stage, enabling them to reach their zenith with a faster pace. The project aims at broad-basing, developing, and transforming University Sports for the individual, community, economic and national development. Hence, training of intellectual task-force of sporting experts, is of paramount importance for generating latest professional knowledge and harnessing technical skills, to give a proper shape to the talented young sportspersons. As a result, those superior athletes, who sweat more in rigorous training, less they bleed in the war-like grim situations of sporting tournaments, to surge ahead at a brisk velocity in the professional world.

In modern education, sports play an important role in the development of an integrated personality of the youth-a hope for brighter future of the nation and a vanguard of the society. Accordingly, sports have become a prime need for developing a civilized society, helping to promote national integration, professional development and interpersonal skills of the participants. Consequently, active, healthy and fit population reflect a Visibility of the Nation, whereas unfit and weak people become a big Liability to the Nation. After the deep impact of COVID-19 there may be a felt need for all to adopt active, healthy and productive life-style, to contribute significantly in the national resource-pool and it would be a feather in the cap of India, to be capable of avoiding so many teething troubles in a completely changed life.

India being an academically driven society has largely fallen short on sporting excellence as a mainstream career option, the neglect of sports led to a low performance level of Indian athletes at Olympic Games, so far. The major bottle-necks in the process of stimulating a vibrant sporting culture have been the lack of career opportunities and financial insecurity of the sportspersons. The quality of man-power is the most important factor for training of high potential sportspersons. As a result, actions of Champions Speak Louder than their Words, coupled with a Fight to the Finish approach, aiming to achieve a defined target of highest possible performance at global sporting events, within a specific period of time.

2.**Vision:** The vision of the Government of India is to give impetus to the sporting culture in university sector, for developing India as a healthy nation, in due course of time. Further, promoting trends of active, fit and productive life style among the youth population is of utmost importance, for improving the image, productivity and strength of the nation. Therefore, pursuit of sporting excellence is a wonderful privilege, imposing great duties of talent identification, fulfilment of brilliant tasks of talent development and realization of noble ideals of displaying high performance at Olympic Games. Therefore, the bone of contention is to prepare a detailed road-map for pursuing excellence in competitive sports.

In the present times, with a crippling impact of COVID-19 on over all human personality and performance, people of all ages may be forced to change their mind-set and adopt sports as a dynamic way of life. It would also serve a socio-cultural function of providing healthy means of entertainment, recreation and relaxation to the citizens, especially the younger generations. Sport is an effective process of channelizing youthful energy into constructive and productive directions, as a nation building process. Now, the youth being a main focus of attention, competitive sports have increasingly emerged as an industry, through enough investments, with assured returns in terms of personality development, improved performance and professional development of the youth population. Inevitably, India needs to adopt an active and healthy lifestyle to improve quality of life of its people leading to high productivity, progress and prosperity of the nation.

Hence, research and development (R&D) being a top priority for overall development, deserve an adequate investment, to create an enabling environment, where commitment and creativity is expected to flow out of the bright-brains, nurtured on human ethics and moral values. Moreover, physical fitness and social well-being of the people are two very crucial factors for developing a dependable scientific support to talented sportspersons, for economic growth of the country, in a near future. For this purpose, a new robust National Physical Fitness Programme (NPFP) needs to be re-formulated, launched and executed in school sector effectively, making it as an integral part of education curriculum, to be evaluated through semester system, for improving final grades, along with holistic development of personality of the youth.

Further, students need to be evaluated on six parameters of basic health and physical fitness such as cardio-respiratory endurance, muscular strength, muscular endurance, flexibility, explosive strength and body composition. Hence, the issue of bringing sports in the Concurrent List of Constitution has been discussed many times and Draft of Sports Bill is lying on the table of Parliament for discussion and consensus of both the Houses of the Parliament of India. There is also another special scheme in the pipe-line, to provide scholarships to the potential students, who excel in priority sports, with an extraordinary performance. Thus, the AIU and the SAI being the partners, need to go ahead with the joint project, for its successful implementation, without changing their Horses in the Midstream, while pursuing excellence in aggressive sports, keeping an Eagle`s eye on winning more number of medals in Olympic Games.

3.<u>Mission:</u> Mission of the Govt. of India is to create basic sporting culture, nurture identified talent, structure National Sports Policy and develop sporting infrastructure in education sector, for producing world- beaters in competitive sports, especially games in which India has adequate potential and strength to be projected at global level. Finally, a majestic plan of National University Games has been designed and developed to deliver the desired results at international sporting competitions. At present, the pursuit of excellence in competitive sports, especially for the youth is at the Cutting Edge, to give a new lease of life to the national campaign, for enhancing the striking power of our elite athletes during the most aggressive and crucial moments of the tough tournaments. Therefore, to keep pace with rapidly changing sports, our superior athletes need to be pushed harder to be Close on the Heels of Olympic Champions and World Beaters. Hence, meticulous planning and strict implementation of a strategic action plan, is a Tall Order of the Day in the domain of professional sports, for achieving a peak performance at higher ranking sporting championships etc.

Previously, the subject of promoting sports, especially for the university youth, remained as a most neglected area of human resource development and it was put on the Back-Burner, as a last priority in the agenda. Moreover, public spending on the youth sports was not adequate enough to run the show properly. Hence, in the absence of encouraging results, our ailing sports system failed to attract and motivate the youth to take-up sports as a career and lifestyle. Therefore, objective of University Games is to improve the Medal Tally of India at Olympic Games and other World Championships, to a greater extent. Thus, building-up the value of elite sports in higher education, is expected give a timely boost to our sporting performance at global matches, by providing advance training and competitive exposure to top-class athletes.

Now, the Ministry of Youth Affairs and Sports is determined to create an enabling environment for fair play, leaving no stone unturned, for making sports drug free, in the country. Therefore, a provision of advance training and competitive exposure at international level would inspire the elite athletes, to take-up sports as a serious business. There is no point of leaving our talented athletes at the mercy of careless sports administrators, who treat National Sports Federations (NSFs) as their personal fiefdoms, wearing several hats at different times, for fulfilment of their vested interests, at the cost of national resources.

4.**Objectives:** In the modern era, University Sports are considered to be a cradle and the nerve-centre of Indian sports, with abundant potential energy for achieving excellence at all levels, if the talent is tapped and trained at an appropriate age, with a professional and scientific approach. The scheme has been designed to explore every avenue for raising the standard of performance of Indian elite athletes, with a view to put our past behind in the background. The significant objectives of the project are given below:-

- To Project India as a powerful sporting nation at global competitions, by developing the base of the university Sports, making it affordable and transparent for holistic development of elite athletes, with a view to display an impressive sporting performance at international level.
- To take India into the league of top performing countries, by introducing professionalism in the management of competitive youth sports, providing scientific support to athletes during advance training and international exposure, for sparking a revolution in Indian sports.
- To attract and motivate talented youth, by providing them adequate incentives to take-up competitive sports as a career option, with ample employment opportunities, both in public and private sectors, for creating and establishing a large pool of talent in the country.
- To produce Olympic Champions for winning a respectable number of medals in most of the global sporting championships, through a pyramidal approach, selecting natural talent from schools, colleges and universities ensuring active and regular participation in high priority sports.
- To promote a cadre of highly competent sporting professionals such as coaches, leaders, trainers and sports scientists, enabling them to handle an important responsibility of creating a conducive environment for pursuit of excellence, in high priority sports, in education sector.
- To create an inspirational value of competitive sports among the younger generation, encouraging them for active participation in National University Games, with the same enthusiasm as our national athletes look forward to participate, with an aim of winning medals at global events.
- To build-up a robust platform for talent identification and talent promotion, with a professional approach, for raising performance standard of the domestic tournaments and

events such as National University Games, at par with the performance level of the World University Games.

- To bench-mark the technical conduct of National University Games, as per the international rules and standards, for providing a rare opportunity to our budding athletes to compete in intensely aggressive environment, where in superior athletes can stare in the face of their counterparts.
- To give a feel of the Test of Fire to the top sportspersons, as a much needed exposure of tough competitions- National Championships and other events, enabling them to emerge as true champions. Therefore, a level playing field would be provided to all deserving and best athletes.

5.**Components:** The National University Games is an ambitious project, including high priority disciplines of sports. This scheme not only captures the public imagination but also encourages deep involvement of all institutions of higher learning, ensuring maximum participation of gifted sportspersons, for developing a culture of sporting excellence. The major components of strategic action plan are given below:-

- National University Games is an unprecedented pan India scholarship scheme, covering 1000/- most talented young sportspersons, each year across all high priority sporting disciplines, ensuring merit based selection, advance training and meaningful participation in top level events.

- Each athlete selected under National University Games scheme will receive an annual scholarship worth Rs. 5.00/- Lakh only for the period of Eight Years, for meeting expenditure on his/her education, advance training along with international exposure, for achieving consistent results.

- A long term development programme would be formulated, as per requirements of the gifted and talented sportspersons by experts, to pursue training and sporting excellence, especially in priority sports, wherein they can compete and win a good haul of medals in Olympic Games.

- The initiative taken by the Government for pursuing excellence in competitive sports in university sector, would prove to be a real Game Changer, inspiring the youth to adopt an active, healthy and productive lifestyle, involving potential athletes, largely from the younger generations.

- The scheme is designed and developed, with a view to establish 25 Universities (Six in Each Zone) as Centres of Excellence, for providing essential support to talented, trained and superior athletes to pursue dual pathways of higher education and competitive sports as their career option.

- Finally, a detailed action plan needs to be implemented to cover 200 million children in the age group of 8-15 years, under a massive National Physical Fitness Programme, with a view to improve their basic health and physical fitness, ensuring all-round development, in due course of time.

6.**Features:** National University Games being a major policy decision taken by the Government of India, for developing a sound foundation of competitive Youth Sports, by changing the mind-set and making sports as a vibrant way of life for the people, especially the youth population.

Hence, the scheme is an earnest endeavour to provide maximum access to a well-designed, well-structured, well-organized and well-supervised sporting competition(s), for the purpose of giving a timely boost to University sports. The programme seeks to engage talented youth in sporting activities, who are living in deprived, disturbed and remote areas in the country, with an aim of keeping them away from anti-social elements, who are usually involved in disruptive activities. Therefore, an effective execution of action plan can truly be an Acid Test for the survival and success of Indian talent in highly competitive world of professional sports.

Today, University Sports is a revised Athlete Development Game Plan, including various measures and steps for preparation, execution and evaluation, for developing India as a high performing nation, to give a timely boost to sagging standards of Indian sports. Thus, existing Indian sports system, need to Burn their Old Boats and go all-out to promote sports seriously, keeping all the factors in view such as dynamic economy, growing population, huge size and talent, to avoid a wild goose chase and Red-tapism in bureaucratic system of National Sports Federations and Indian Olympic Association.

Recently, Sports Ministry has resolved to rope-in top industrialists and corporate icons through a public- private-partnership, to generate an adequate amount of financial resources, for management of National Sports Development Fund, as a non-taxable corpus, for promoting sports. For this purpose, Govt. of India has decided to establish an Executive Board, including representatives of those business houses, whose track-record in providing financial support to sports promotion and infrastructure development, through Corporate Social Responsibility(CSR) has been found quite encouraging. Hence, resource generation for pursuit of excellence in elite sports has become a tough job of climbing the Mountain Everest, due to deep impact of COVID-19 on the economy and all other resources of the country. Now, sports bodies are bound to Tighten their Belts, to survive and succeed, in the area of sport promotion.

7.**Scope:** A progressive action plan has been prepared by a panel of professionals, in such a way that it does not reflect the image of a poor leader, who is in habit of Biting Off More Than he/she Can Chew, while implementing the schedule on the field effectively. The major areas of the proposal are as under:-

a) Community Coaching Development.
b) State Level Youth India Centres.
c) Annual Sporting Competitions.
d) Development of Playing Fields.
h) Physical Fitness of School Children.
I) Competitive Sports for the Women,
j) Talent Search and its Development.
k) Support to National Sports Academies.

8.**Main Focus:** Today, the focus of attention of all the stake-holders in sports promotion, is on developing much needed sporting infrastructure, for pursuing athletic excellence in the university sector. Therefore, achieving a sure success at global matches, without a positive frame of mind and lack of Fight to the Finish approach, appears to be a huge bottle-neck. However, some of the most significant areas and aspects of the National University Games project, based on professional orientation are given below:-

First: Introduction of professionalism in the process of promoting good health and basic fitness of the youth, for adopting active and healthy life style is of paramount importance, for developing sports culture in university sector. Hence, a well-structured schedule of fair selection, advance training and purposeful participation in regional, national and global events is need of the hour. Therefore, professionally trained and adequately paid support staff need to be appointed as observers, to ensure a strict implementation of ambitious project, for achieving the desired performance in sporting events at all levels.

Second: A provision of sound financial and technical support to elite sportspersons, is crucial for ensuring advance training and meaningful participation in various top-class tournaments. Therefore, NSDF and CSR will play a pivotal role, by providing a timely financial support in the process of realizing an ultimate dream of elite athletes for winning Gold Medal(s) in Olympic Games. Therefore, the talented athletes selected for receiving NSDF grant should not only have a sense of their entitlement, rather they also need to make-up their mind, to deliver the peak performance at higher ranking championships and sporting events etc.

Third: There is an urgent need for optimal utilization of mass-media by the experts, to glamourize modern concept of promoting sports and revolutionize performance of elite sportspersons. National University Games project is a well-defined road-map, for ensuring proper growth and holistic development of the youth population in education sector. Accordingly, all customized and latest training techniques would be provided to gifted athletes, as per the specific requirements of his/her sport or event, under the close and careful observation of the qualified coaches and fitness trainers. Otherwise, performance of Indian athletes at the global events, may prove to be a Flash in the Frying Pan.

Fourth: Highly specialised coaches and qualified fitness trainers would be attached with all selected teams of Indian Universities, during training, exposure and participation. The services of sports scientists, with established calibre and credentials would be made available, to observe the behaviour of potential sportspersons, enabling them to manage stress and generate a strong Will to Fight, during highly aggressive environment. All best possible efforts are being made, to eradicate and prevent use of doping in competitive sports, to avoid the serious violation of WADA regulations. On the perusal of various reports, the present of trend of doping in sports is the Tip of the Iceberg.

Fifth: A strong workable mechanism has been put in place, to prevent and redress the grievances of women athletes, related to sexual harassment, within a stipulated period of time, to provide a secured environment to them, during training, exposure and competitions, with a fair and square approach. Hence, there is a felt need to confront such unfortunate situations, as and when arise, by taking the Bull by the Horns, to avoid unwanted disgrace and stigma in the sporting environment.

9.**Thrust Areas:** A dynamic mind-set with healthy life-style adopted by the youth is considered to be a stepping-stone, not only for attaining high performance but also sustaining an impressive athletic achievement (S) at international championships. Therefore, in the age of science and technology, the story of a “Blind leading the Blinds” and struggling in the darkness, becomes totally irrelevant and out-dated, in the process of producing World Champions, for winning more and more Medals in Olympic Games and other World Championships etc. A few important thrust areas of the project are given below:-

- A long term development plan for fair selection, advance training and goal-oriented participation of elite sportspersons, with high quality potential, in intensely contested sporting tournaments, needs to be prepared for strict implementation, followed by an effective evaluation of performance.

- A regular provision of adequate sources and resources for motivating talented athletes to take-up sports as a full-time profession, needs to be developed and executed by a panel of experts to maintain the interest and ability of sportspersons, by following a serious approach for their livelihood.

- An adequate amount of finance needs to be generated, by public-private-partnership for the pioneering project, for promoting high priority sports and developing a progressive mind-set and healthy lifestyle, to be adopted by the younger generation during study period in universities.
- There is a dire need to take up effective measures and productive steps, for educating potential young athletes, for preventing use of the banned drugs during advance training and competitive sporting tournaments. Hence, a regular dope testing of talented athletes may be the best way forward.
- A time-bound development of sporting infrastructure, being a back-bone of sporting performance, needs to be ensured by the Government of India, for scientific training and participation of genetically rich athletes in various tournaments, is very important to realise their full potential in sports.
- A provision of continuous scientific support to the selected athletes, with high class potential is need of the hour, not only for effective training but also for achieving successful athletic performance at National University Games, World University Games and other International Championships.
- A periodic international competitive exposure to potential sportspersons against superior athletes, for testing the quality of genetic talent and scientific training, by a panel of experts and professionals, deserves the highest priority in the Macro, Meso and Micro cycles of advance coaching.
- A strong monitoring mechanism being an integral part of the existing sports system is expected to play an important role, in improving and maintaining consistency in sporting performance of elite athletes, with top quality potential, before actual participation in international sporting exposure.
- A regular up-dating of professional knowledge and technical skills of the support staff-specialised coaches, fitness trainers, sports scientists and sports nutritionists, is very important to impart the latest training to sportspersons, for successful performance in world-class competitions.
- A system needs to be established for an independent evaluation of performance of selected and trained players, in advance training and projection at the most crucial moments of University Sports, keeping in view the defined target of athletic performance, formulated by the experts.

10.Global Trends: In the present scenario of competitive sporting world, athletes, coaches and trainers are bound to undergo extreme conditions of training and tough sporting events, where those who cannot adapt and cope with changing times, usually lag behind in the race for future success. Hence, it is observed that professional sports are increasingly becoming more aggressive due to economic, political and social significance attached to the Medal Tally at Olympic Games. Further, keeping in mind the performance level and standard of Olympic Games and other World Championships, potential athletes and specialized trainers are in the Midst of a Revolution of rising expectations, for achieving a high target of sporting performance. further, sports coaches and sports scientists, are on toes with a tough job of testing the High Ranking Talent in the troubled waters, to track the mind of superior sportspersons in training and competitions.

Presently, most of the performing nations are fired with a strong ambition to display their ever best athletic performance in concrete terms at World Championships. Therefore, sporting countries are pursuing a serious business of promoting competitive sports, with a professional, scientific, and technological support, to be financially sufficient, by creating an enabling environment, wherein elite athletes, specialized coaches, sports scientists, corporate icons and media-persons can work as a team, to design policy and develop action plan to deliver desired results, Therefore, there is a visible trend of maintaining a fine balance of Autonomy and Accountability in the functioning of

National Sports Federations all over the world, maintaining all checks and balances to ensure that Hard Earned Money of the Tax Payers does not go down the drain. Similarly, Indian sports system needs to put its Shoulder to the Wheel and encourage a Red-Carpet Treatment to the investors, in sports promotion and infrastructure development, at the grass-roots level in the country.

11.**Top Priority**: There is a fascinating question as to what extent a superior athlete is capable of performing, with a creditable performance at top-class sporting championships, under extreme competitive environmental conditions, without suffering injuries, on account of over-loading both in rigorous training and extremely contested competitions? Today, training schedules for attaining superb sporting achievements at international level, are usually developed by a core-group of professionals. Now, gone are those days, when a Jack of all Trades and Master of None used to dictate his terms, for the achievement of one`s personal gains. As a result, Indian sports continued to suffer to the extent of no repair. Consequently, wings of the political birds need to be clipped, to avoid unwanted interference in the process of promoting sports excellence.

Further, the modern concept of sports promotion includes-an optimization of genetic endowment in prevailing environmental conditions and customized training elements, best suited to requirements of top-class sportspersons, related to their health, fitness nutrition and performance. For this purpose, National University Games project has been launched, enabling outstanding athletes to compete against world-beaters in World University Games and Olympic Games, in neck-to-neck fight to achieve a set-target of high performance in due course of time. The essence of sports has a great power to educate, prepare, transform and unite athletes, for fulfilment of a common cause and realization of noble ideals of life.

Additionally, the emerging paradigm shift in scientific research and professional management of Youth Sports in the world has come of age and carved a niche, which superior athletes and fitness trainers can ignore only at their own peril. Therefore, significance of scientific support to elite athletes, for successful performance is indispensable and stands well established. The present trend of promoting professional sports has created a strong interest among performing nations, to produce a Second String of Trained Athletes, for making the presence of their country felt, by displaying an impressive performance at global matches.

12.**Scientific Support:** The significant contribution of scientific support to the peak performance in world class sporting events is truly indispensable, especially while preparing superior athletes for participation in Olympic Games. Accordingly, a team of sports scientists needs to be attached with national athletes or teams selected purely on merit basis, to provide them scientific support during training and goal-oriented participation in various build-up competitions. Further, a mechanism would be introduced, for maintaining an effective co-ordination between Human Performance Laboratory and Practical Sports Field, developing a good understanding between Sports Scientists and Specialised Coaches. Therefore, athletes being in the front line, they usually face and feel the Heat of the Grinding Stone during training and tournaments, as they are the only people, who actually know Where the Shoe Pinches and nobody else can explain the feelings of an intense Test of Fire that makes fine steel, leading to transformation of the natural talent.

Every potential athlete selected under National University Games project, for pursuing excellence in any event or sport of his/her ability, choice and interest, dreams of taking extremely aggressive professional sports world by storm. But only a few dreamers, however, make their dreams come true, because it takes a lot of tireless efforts to become a world-beater. Hence, best athletes need to be trained, applying most effective techniques of fast recovery and relaxation. Thus, after a long duration of rigorous training, the potential athletes start learning to get into their strides for handling themselves effectively, to perform well in odd situations with a higher degree of difficulty in an event. Thus, no amount of technical proficiency will help a talented athlete, to perform well at a crucial moment, in the absence of positive mental make-up and sound preparation. No doubt, India has a huge gold-mine of natural talent, for realisation of its full potential, by converting stumbling blocks into stepping stones of sure success, including an element of sudden surprise.

13.**Psychological Training:** In the 21st century, a practical and vibrant society of technical experts, is rapidly emerging in the market of commercial sports, where professional knowledge is the primary production resource, instead of financial capital and competent man-power. Therefore, psychological conditioning of top athletes is more important than physical and technical preparation, for generating a strong Will to Win, at any cost, while competing against the superior athletes. Therefore, India needs to be fully armed and equipped with all the sources and resources, based on scientific and professional approach, to hit the Bull`s Eye and win Gold Medal(s) in Olympic Games. The stress being an integral part of a performing athlete's professional life, continues to rise to the higher levels. Further, in order to achieve higher target of sporting performance quickly, athletes and coaches over-work, stretching the physical and mental limits of the elite sportspersons to the breaking point. Therefore, a higher degree of stress is bound to arise out of actions, perceptions and reactions of the athletes both in training sessions and tough sporting competitions.

In the present times, sports psychologists are of the firm opinion that a Moderate Level of Competitive Stress is absolutely necessary for pursuing a successful performance during intensely contested competitions. It is an established fact that whenever the level of stress rises beyond certain degree, then it is bound to affect sporting achievements of athletes adversely. Now, the all-round development of elite sportspersons plays an important, to achieve superb performance at all levels. Accordingly, potential sportspersons need to be conditioned and trained, how to manage stress or use stress to their advantage. Furthermore, the process of stress management is both an Art and Science, for helping athletes to perform to the best of their genetic ability, in a neck-to-neck race against time and rise to special occasions of sports.

14. **Genetic Factors:** Several scientific studies reveal that genetic richness of athletes play an important role in achieving a remarkable performance at world level sporting events. Therefore, sporting excellence is the question of biology; any athletic activity requires muscle-power in terms of adequate bulk and oxygenation capacity. Thus, genetic factors and socio-economic conditions can be responsible for our sports-deficient culture, from thrifty genes to our weaker bone-structure, from our cereal-rich diet to nutrition-deficient status, leading to India's dismal performance at the global competitions, to a greater extent.

According to Dr Shashank Joshi, "the thrifty genes that Indians have developed following bouts of famine and epidemics over the years. Thus, as a genetic conservation mechanism, genes of Indian population learnt to hoard fat in order to survive. But the thrifty genes are making Indians living in a Zip-Zap-Zoom urban milieu susceptible to obesity with more fat, less muscle creatures". As a result, a mill-stone would be put-up round neck of those athletes, who have poor genetic endowment or low immunity level, trained by those coaches, who have out-dated professional knowledge and technical skills. All these factors made the task of athletes too difficult to perform well at international athletic championships. In addition, functioning of present sports system including- National Sports Federations and Indian Olympic Association appears to be quit inefficient in dealing with the sharp decline in performance of Indian athletes, due to internal conflict, leading to a Miscarriage of a Political Will, while dealing with process of promoting excellence in sports.

Basically, the issue of our dismal performance level is related to lack of nutrition and poor quality life-style over generations that developed Indian mentality which does not encourage people to pursue sports as a career option. Therefore, a scientific training, with a professional approach, for the period of 8 years, is expected to give a proper shape to the talented sportspersons, to represent India at Olympic Games. The process of holistic development of athletes includes-creation of a strong base enabling them to stand the test of time and fight against all the odds in training and tournaments, with an aim to stand on the Victory Podium, to be counted in the league of best performing nations and place India on the world map.

15.**Conclusions:** National University Games are considered to be the nerve-centre and a cradle of Indian Sports, with abundant potential energy to perform creditably well at international level championships, if the talent is tapped and trained at an appropriate age on scientific principles. Eventually, the professionals are on the war-path, for preparing outstanding athletes, enabling them to face the Test of Fire during the war-like situations of fiercely fought sporting competitions. Inevitably, it is the ability of superior sportspersons, to adapt and execute training schedule(s), under the watchful eyes of duly qualified and competent support staff, which makes the major difference in the performance of players on the sporting arena, to the complete satisfaction of all the stake-holders. The following are the main conclusions of the scheme:-

- A strategic action plan needs to be prepared by the professionally qualified people, for an effective marketing of National University Games, popularising and promoting the modern concept of sports, is expected to give a timely boost to Indian sports, especially high priority games.
- The younger generations need to be attracted and inspired to take-up competitive sports as a full-time career option, as sports is increasingly becoming a big industry in the country which needs to be projected well, with a commercial and professional approach, by the experts only.
- The youth population needs to be encouraged to adopt sports, as per their ability, choice and interest as an active, healthy and productive lifestyle, for improving and maintaining fitness level, to enhance productivity of the nation, leading to sound economic growth in due course of time.
- In university education, sports need to be recognized as a practical and transformative learning process, for preparing the youth for the life, ensuring their holistic development-Body, Mind and Spirit, enabling them to face various eventualities of life effectively and meaningfully.
- National University Games are acknowledged as a pan India futuristic action plan, with a purpose to foster an urge amongst the youth of India, to be self-reliant, well-disciplined, well behaved and well-adjusted in their rapidly changing, challenging, professional and social environment.
- The professionals are of the firm opinion that once Sporting Excellence is Equated with Academic Excellence in our country, on account of its significant contribution to the national development, it would definitely prove to be a huge mile-stone, for deciding the fate of Indian sports.

16.**Recommendations:** Now, India is on the move for achieving a land mark in developing sports culture, for pursuing excellence at global events. The important recommendations are as under:-

- India needs to design a comprehensive road-map, for an effective marketing of National University Games, for generation of adequate finances, as the Government funding is bound to fall short, while implementing the project successfully, to realise full potential of the youth.

- A high allocation of budget needs to be sanctioned, especially for high priority sports under University Games Scheme, launched by Ministry of Youth Affairs and Sports, with a view to pin-point India`s best hopes on winning a respectable number of medals in Olympic Games: 2024.
- The menace of drug abuse in sports being a serious threat to the life of athletes needs to be eradicated and tackled immediately, with a scientific approach, to protect the duly trained potential, from deadly side-effects of banned doping on their health and performance.
- An active participation of women athletes in National University Games needs to be encouraged, to maximise their potential, health, fitness and performance level. Accordingly, all National Sports Federations need to get down to the Serious Brass Tacks of sports promotion.
- The electronic media including private channels need to be suitably mobilized and optimally utilized, for strengthening much needed basic sporting culture in education sector, to throw-up talented and trained sportspersons, so as to feed the national stream, on the regular basis.
- Over a period of time, the evolution of National University Games is expected to broad-base and Spark a Revolution in the performance of best sporting icons, ensuring Peak Performance, for winning many laurels at global sporting events- Olympic Games and World Championships.
- Today, participation in games and sports is being considered as a Wonder Drug for prevention of various deadly psycho-somatic ailments and social ills in the world. Further, it also helps in improving physical fitness, mental health and emotional stability of all the participants.
- Based on critical analysis of the project, it is suggested that genetically rich athletes, need to be selected on the priority basis, from the remote and rural areas, for advance training based on scientific principles and professional approach, followed by an international exposure.

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STUDY OF ANTHROPOMETRIC AND PSYCHOLOGICAL DISCRIMINATING FACTORS OF HIGH CHOLESTEROL

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ABSTRACT

The purpose of the study was to find out the discriminating predictors of high cholesterol and normal blood cholesterol group of teacher. A total sample of 520 (254 males and 266 female) university teachers of Chhattisgarh was selected for the study. The dependent variable for the study was High cholesterol and healthy group of teacher. The independent variables were body mass index, physical activity, age, weight, height, waist hip ratio (anthropometric) hypo-kinetic problems awareness, personal and environmental barrier to physical activity (psychological) and physical activity level. The high cholesterol and normal cholesterol groups were identified by checklist and the other variables were assessed with help of questionnaires. Discriminate analysis was used to analyze the data. The result indicated that the independent variables, age, waist hip ratio and personal barrier to physical activity, emerged out to be discriminating predictors, contributing significantly in discriminating the two groups. These variables contributed 81.3%, 40.7% and 39.7%, of their variance respectively. Significant positive association between predicting factors with the high cholesterol group was found, indicating their role in cholesterol problem.

Keywords: High cholesterol, sedentary life style, Hypo-kinetic Problems Awareness.

INTRODUCTION

High cholesterol is serious Hypo-kinetic problem of modern times. The other hypo-kinetic problem is cardiovascular disease (CVD) which is a class of diseases that involve the heart or blood vessels. Cardiovascular disease includes coronary artery diseases (CAD) such as angina and myocardial infarction (commonly known as a heart attack) Other CVDs include stroke, heart failure, hypertensive heart disease, rheumatic heart disease, cardiomyopathy, heart arrhythmia, congenital heart disease, valvular heart disease, carditis, aortic aneurysms, peripheral artery disease, thromboembolic disease, and venous thrombosis (Mendes *et al*., 2011). High cholesterol is also associated will lack of physical activity (PA) and has been included in this study cholesterol is a bile and stereos followed by the chemical suffix- all for an alcohol, is an organic molecule. It is a sterol (or modified steroid) a type of lipid molecule, and is biosynthesized by all animal cells, because it is an essential structural component of all animal cell membranes; essential to maintain both membrane structural integrity and fluidity. (Mendes *et al*., 2011).

The other hypo-kinetic problem is Cardiovascular disease (CVD) which is a class of diseases that involve the heart or blood vessels. Cardiovascular disease includes coronary artery diseases (CAD) such as angina and myocardial infarction (commonly known as a heart attack) Other CVDs include stroke, heart failure, hypertensive heart disease, rheumatic heart disease, cardiomyopathy, heart arrhythmia, congenital heart disease, valvular heart disease, carditis, aortic aneurysms, peripheral artery disease, thromboembolic disease, and venous thrombosis. (Mendes *et al*., 2011).Cholesterol enables animal cells to dispense with a cell wall (to protect membrane integrity and cell viability), thereby allowing animal cells to change shape rapidly and animals to move (unlike bacteria and plant cells, which are restricted by their cell walls).

Body composition is important factor in the assessment of health and fitness; hence Obesity was a part of hypo-kinetic disease for the present of study. Obese is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health. People are generally considered obese when their body mass index (BMI), a measurement obtained by dividing a person's weight by the square of the person's height, is over 30 kg m-2, with the range 25±30 kg m-2 defined as overweight health (WHO, 2015). Some East Asian countries use lower values (Kanazwan, 2005). Obesity increases the likelihood of various diseases and conditions, particularly cardiovascu1lar diseases, type-2 diabetes, obstructive sleep apnea, certain types of cancer, osteoarthritis and depression (Haslam and James, 2005 and Luppino et al., 2010).Huang et al. (2007) in a study on female health professionals with no prior cardiovascular disease, who were asked to provide information regarding high density lipoprotein reported that women underestimated their total cholesterol by 9.7 mg/dl (95%) higher levels of self-reported cholesterol were strongly associated with increased risk of cardiovascular disease. Women with obesity, smoking, untreated hypertension, or sedentary lifestyle has decreased awareness of their cholesterol levels. Self-reported cholesterol underestimates measured values, but is strongly related to cardiovascular disease. Lack of awareness of elevated cholesterol is associated with increased risk of cardiovascular disease. Literature reveals that patients of high cholesterol undergo with the various type of problem like cardiovascular disease, Obesity, High Blood pressure and Diabetes. Hence the present study was undertaken to find out anthropometric and psychological determinants of high cholesterol.

Objective

Objective of this research was to observe the discriminate predicting factors (Age, height, weight, waste circumference and hip circumference were measured to calculate body mass index and waist hip ratio, Physical activity level, physical activity awareness, barrier to physical activity, BMI and WHR) of high cholesterol group and non cholesterol group (healthy group) of Chhattisgarh university teachers.

Hypothesis

The anthropometric and psychological variables taken in the present study will discriminate the Cholesterol group and normal group of subjects.

Method

A total sample of 520 (male and female) teachers from different colleges and university of Chhattisgarh was selected following purposive sampling method for the present study; age range of the subjects was between 30 to 65 year. The collected data was analyzed through statistical software SPSS version 16 for windows and excel 2007. P-value of 0.05 was taken as significant

RESULT

The University teachers of Chhattisgarh on the basis of responses were categorized under Cholesterol group and normal group of subjects. Results of discriminant analysis are presented in Table 1,2,3 & 4.

Table 1: Discriminating predictors of high cholesterol from normal health group

Variable	Function	Eigen value	Canonical Correlation	Wilks' Lambda	Chi-square	Sig.
Psychological	1	.129^{a}	.338	.886	35.410	.000

First 1 canonical discriminate function was used in the analysis.

Table 1: reveals that chi-square value is significant, it means that the discriminating factors discriminate the two groups, contributing 12.9 per cent of their variance.

Table 2: Predictors of high cholesterol and normal health

Body Composition Variables	Wilks' Lambda	F
Body mass index	.996	1.068
Personal barrier	.979	6.354**
Environmental barrier	.999	.160
Age	.991	2.550
Weight	.995	1.531
Height	1.000	.102
Hip	1.000	.060
West	1.000	.068
West: hip ratio	.999	.160
Physical activity	.980	6.041**
Hypo-kinetic disease aware	.921	25.386**

Significant Level (** P < .01) & (* P < .05)

Table 2: reveals that personal barrier, physical activity awareness and hypo-kinetic problems awareness emerged out to be significant discriminating predictors of high cholesterol group from normal health group.

Table 3: The high cholesterol predictors in structure matrix

	Function
	1
Hypo-kinetic activity aware	.813
Personal barrier	.407
Physical activity	.397
Age	-.258
Weight	-.200
Body mass index	-.167
Waist: hip ratio	-.065
Environmental barrier	.065
Height	-.052
Waist	-.042
Hip	-.040

Table 3: reveals that hypo-kinetic awareness, personal barrier and physical activity contribute 81.3, 40.7 and 39.7 per cent of their variances in discriminating high cholesterol group from the normal health group teacher. The positive relationship with awareness of hypo-kinetic problem and physical activity indicates that higher the hyper-kinetic problems awareness and physical activity lower will be risk of high cholesterol among teachers and higher the personal barrier higher is the risk of high cholesterol.

Table 4: Discriminating predictors of obese from normal health group

Function	**Eigenvalue**	**Canonical correlation**	**Wilks' lambda**	**Chi-square**	**Sig.**
1	.051[a]	.220	.952	14.981	.183

a. First 1 canonical discriminate functions were used in the analysis.

The discriminate analysis result presented in Table 4: reveals that the chi-square value is insignificant; it means that the discriminating predictors do not discriminate the obese group from normal health group. The positive relationship indicates that higher the hyperkinetic problem awareness and physical activity lowers will be the risk of high cholesterol obesity.

The hypothesis stating, physical activity, prevalence of hypo-kinetic problems, hypo-kinetic problems awareness barrier to physical activity, body mass index (BMI) and waist: hip ratio (WHR) would discriminate the hypo-kinetic problems group from normal health group of teachers is verified and is accepted that physical activity, prevalence of hypo-kinetic problems, hypo-kinetic problems awareness barrier to physical activity, body mass index (BMI) and waist: hip ratio (WHR) are the discriminating predictors of hypo-kinetic problems among teachers.

DISCUSSION OF FINDINGS

In this study, we found that obesity and high cholesterol were significantly associated with an increased risk of developing cardiovascular disease, Obesity, High Blood pressure and Diabetes. This association was independent of age, ethnicity, smoking status, physical activity, alcohol intake, antidepressant and sedentary life style. The result indicated that the independent variables, age, waist hip ratio and personal barrier to participate in physical activity, emerged out to be significant discriminating predictors which contribute in discriminating the groups. The nature of the teacher's job involves high level of mental activity, and less physical activity, leading to sedentary life style, making them prone to the risk of developing life style diseases (Kumar & Shrivastava,2018; Kumar & Shrivastava,2017; Nishad,2018).

The latest National Health and Nutrition Examination Survey reports that obesity affects 33% of men and 35% of women, whereas 16.3% of U.S. adults have diagnosed high cholesterol; because obesity and hypercholesterolemia are modifiable public health problems, and affect many U.S. adults, it is vital to understand associated diseases (Flegal et.al,2010;NCHS,2010). Brindisi et. al (2009) reported that Decreased HDL-cholesterol plasma levels represent the major risk factor associated with coronary atherosclerosis progression. MMWR State-Specific Cholesterol Screening Trends- United States (1991-1999) also reported that High blood cholesterol (HBC) increases the risk for heart disease, the leading cause of death in the United States. Lerman-Garber et al. (1993) also conducted the study and reported that Hypercholesterolemia (HC) is a major risk factor for coronary atherosclerosis and most developed countries currently have public health strategies that attempt to reduce the level of cholesterol.

The present study revealed determinants of high cholesterol among teachers, these determinants provide base line for developing intervention programs to prevent the problem of high cholesterol and obesity. The concept of Exercise as health tool should be promoted for prevention of cardiovascular diseases and Obesity, along with motivational talks, and workshop on benefits of physical activity specifically for preventing health related problems. Awareness related to life style diseases, practicing the appropriate action helpful to prevent the disease is needed. More innovative and creative research questions and designs are still required, to study diverse groups, populations and conditions.

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ATTITUDE OF PRINCIPALS, TEACHERS AND STUDENTS OF INDIA AND THAILAND TOWARDS A QUESTION:

“If for any reason a few subjects have to be dropped from the School program, Physical Education should be one of the subjects dropped”

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Abstract

The purpose of the study was to compare the attitude of the principals, teachers and secondary school students of Thailand and India towards Physical Education (If for any reason a few subjects have to be dropped from the school program, Physical education should be one of the subjects dropped). It is decided to find out their opinion through a WEAR ATTITUDE INVENTORY EQUIVALENT FORM-A QUESTIONNAIRE FOR THE STUDY OF PHYSICAL EDUCATION ATTITUDE SCALES. It was hypothesized that the participants (principals, teachers and secondary school students) of India and Thailand have positive attitude towards Physical education. The study was restricted to the participants of secondary school Principals, Teachers and Students of India and Thailand. The investigator administered the WEAR ATTITUDE INVENTORY EQUIVALENT FORM-A QUESTIONNAIRE FOR THE STUDY OF PHYSICAL EDUCATION ATTITUDE SCALES which consists of 30 questions on the attitude of Physical education. The questionnaire consists of both negative and positive questions. Answer was to be given in 5 points scale. SA, A, UD, D, SD. Wear inventory attitude test is a standard test for Physical Education. In total, 300 students (150 + 150) , 150 Teachers (75 + 75), 60 Principals (30 + 30) were selected from both countries on at random basis. The scores of the Question indicate that the opinion of Indian Principals and Thailand principals are in the same direction i.e. The Principals of both countries disagree that Physical education has no place in modern education. **T** value of the comparison was-1.044 and Pearson’s Correlation value was -0.266 at 0.05 level of significance. The scores of the Question indicate that the opinion of Indian and Thailand teachers are in the same direction i.e. the teachers of both countries disagree that If for any reason a few subjects have to be dropped from the school program, Physical education should be one of the subjects dropped. **T** value of the comparison was 0.322and Pearson’s Correlation value was 0.031at 0.05 level of significance. The scores of the Question indicate that the opinion of Indian student and Thailand students are in same direction i.e. Students from both countries disagree that if for any reason a few subjects have to be dropped from the school program, Physical education should be one of the subjects dropped. **T** value of the comparison was -2.639and Pearson’s Correlation value was 0.080at 0.05 level of significance.

Keywords: Attitude, Physical Education, Principals, Teachers, Students, t-test, Correlation,.

INTRODUCTION

Physical education lessons in school could play an indispensable role in the promotion of positive attitude towards physical activities and a healthy lifestyle. In general basic goal of physical education is to develop a healthy life style and attitudes that promote lifelong physical activity and healthful living. Students with a more positive attitude toward physical education are more likely to participate in physical activity.

Since it is in our school years that the basic habits and attitudes that form adult life are established, this is the age on which our efforts should be focused. The attitudes of each individual reveal how positive or negative he is in coping with a problem as well as how broad a view of things he takes.

It was believed that attitudes which arouse behavior and sustain or terminate an activity and progress, they regulate an organized behavior and they lead to the acquisition of motives and stable disposition to act. In support of this, several attempts have been made to identify teachers or students' attitudes towards teaching and learning of physical education as a science subject but no much positive results has been achieved. It is stated that researchers should as a matter of urgency investigate some means by which desirable changes in the attitudes of principals, teachers and students could be fostered and induced for the acceptance of physical education as an academic subject. Academic scholars may concur with the scholar that the objectives of any science curricular includes fostering favorable attitudes towards science and imparting cognitive knowledge which physical education as a science course is doing in this time.

MATERIAL AND METHOD

Participants: In total, 300 students (150 + 150) , 150 Teachers (75 + 75), 60 Principals (30 + 30) were selected from both countries on at random basis.

Measures: The investigator administered the WEAR ATTITUDE INVENTORY EQUIVALENT FORM-A QUESTIONNAIRE FOR THE STUDY OF PHYSICAL EDUCATION ATTITUDE SCALES which consists of 30 questions on the attititude of Physical education. The questionnaire consists of both negative and positive questions. Answer was to be given in 5 points scale. SA, A,UD, D,SD . Wear inventory attitude test is a standard test for Physical Education

Statistical Techniques

In order to examine the hypothesis of the study, descriptive statistics such as mean, standard deviation, minimum and maximum correlation coefficient was used. In order to establish the relationship, Pearson Product Moment Correlation Coefficient (r) was used. In order to compare the subjects of India and Thailand, 'T' Test was employed and the level of significance was set at 0.05.

Results

After the data were obtained on of selected attitude variables, the subjects of all the groups were compared and correlated on selected attitude variable. The results of analysis are presented in Table 1, 2, 3 & 4.

Table no 1

Frequency distribution of responses of Indian and Thailand subjects towards the Question **"If for any reason a few subjects have to be dropped from the school programme, Physical education should be one of the subjects dropped".**

	Country	Opinion	Frequency	**Percentage**
Principal	India	3	7	**23.3**
		4	16	**53.3**
		5	7	**23.3**
		Total	30	**100**
	Thailand	3	6	**20.0**
		4	13	**43.3**
		5	11	**36.7**
		Total	30	
Teacher	India	3	1	**1.3**
		4	31	**41.3**
		5	43	**57.3**
		Total	75	**100**
	Thailand	4	35	**46.7**
		5	40	**53.3**
		Total	75	**100**
Student	India	2	2	**0.7**
		3	2	**0.7**
		4	89	**60.7**
		5	57	**38.0**
		Total	150	**100**
	Thailand	3	1	**0.7**
		4	71	**47.3**
		5	78	**52.0**
		Total	150	**100.0**

Table no 2

T-Test

India V/S Thailand	**Pair Difference**								
	Mean	**Std. Deviation**	**Std. Error Mean**	**95% Confidence Interval of the Difference**		**T value**	**DF**	**Sig. (2-tailed)**	
				Lower	**Upper**				
Principal	-.16667	.87428	.15962	-.49313	.15980	-1.044	29	0.305	
Teachers	2667	.71610	8269	13809	19143	.322	4	**.748**	
Students	-.15333	0.71171	.05811	-.26816	-.03851	-2.639	149	0.009	

Table no 3

Paired Samples Statistics

India V/S Thailand	Country	Mean	N	Std. Deviation	Std. Error Mean
Principals	India	4.0000	30	0.69481	0.12685
	Thailand	4.1667	30	0.74664	0.13632
Teachers	India	.5600	5	.52608	.06075
	Thailand	.5333	5	.50225	.05799
Students	India	4.3600	150	0.53445	0.04364
	Thailand	4.5133	150	0.51471	0.04203

Table no 4

Paired Samples Correlations

India & Thailand	N	Correlation	Sig.
Principals	30	0.266	0.156
Teachers	75	0.031	0.794
Students	150	0.080	0.330

Interpretation:-

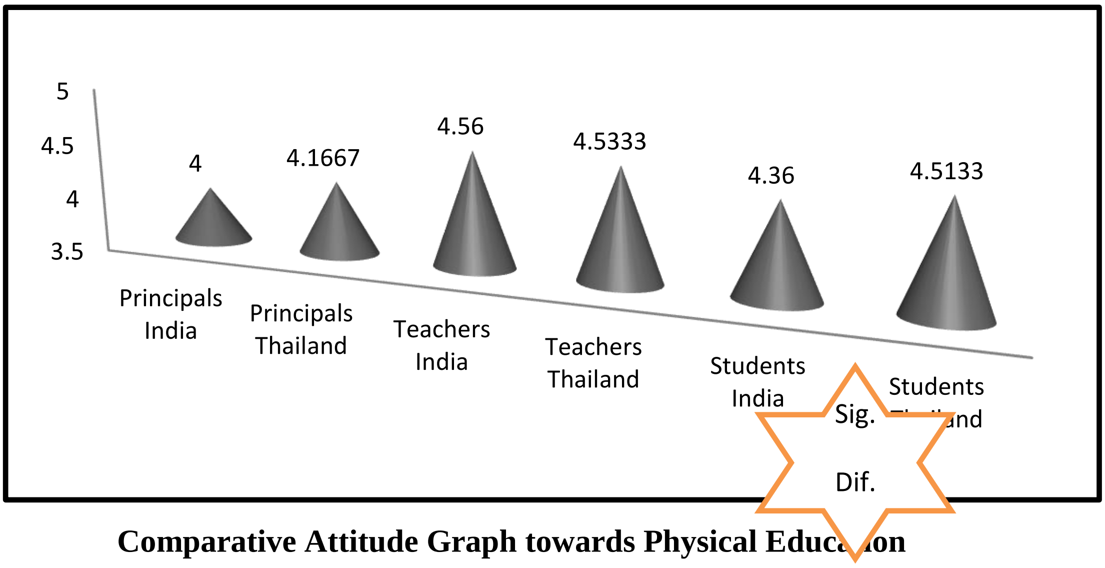
Table 1 indicates the frequency distribution of response of Indian subjects and Thailand subjects Indian principals V/S Thailand principals , Indian Teachers V/S Thailand Teachers and Indian Students V/S Thailand students) towards the Question.

Table 2 indicates that for Question. (**If for any reason a few subjects have to be dropped from the school programme, Physical education should be one of the subjects dropped**.) no **significant** difference was found among the opinion of principals and teachers of both countries, however **significant difference** was found among the opinion of students of both countries towards this question. T value of this question was (-1.044), (0.322) and (-2.639) & P value was (0.305), (0**.748**) and (0**.009**) for the Principals, Teachers and Students of both countries, respectively. Level of significance was tested at 0.05. i.e. if the score is less than 0.05 there was a significant difference in opinion ,or vice versa.

Table 3 indicates the mean and standard deviation of Indian principals and Thailand principals, Indian and Thailand teachers & Indian and Thailand students.

Table 4 indicates that the Pearson's Correlation value **(0.266**), **(0.031**) & (**0.080**) is insignificant at 0.05 level of significance i.e. there is insignificant relationship between the opinion of Indian principals and Thailand principals, Indian teachers and Thailand teachers and Indian students and Thailand students respectively.

Figure 1



Comparative Attitude Graph towards Physical Educa ion

DISCUSSION OF FINDINGS

Attitudes of Principals of India and Thailand towards Physical Education. Found that they have a positive view towards physical education in their respective countries. The scores of the Question indicate that the opinion of Indian Principals and Thailand principals are in the same direction i.e. The Principals of both countries disagree that Physical education has no place in modern education. **T** value of the comparison was-1.044 and Pearson’s Correlation value was -0.266 at 0.05 level of significance.

Attitudes of Teachers of India and Thailand towards Physical education, After the analysis of data it is found that there is no significance difference between the attitude of teachers of India and the teachers of Thailand. The scores of the Question indicate that the opinion of Indian and Thailand teachers are in the same direction i.e. the teachers of both countries disagree that If for any reason a few subjects have to be dropped from the school programme, Physical education should be one of the subjects dropped. **T** value of the comparison was 0.322 and Pearson’s Correlation value was 0.031at 0.05 level of significance.

Attitudes of Students of India and Thailand towards Physical education, After the analysis of data it is found that there is no significance difference between the attitude of students of India and the students of Thailand.

Discussion of Hypothesis

Attitudes of Principals -From the result of the study it is clearly visible that there is no significant difference in the opinion of Indian and Thailand principal towards Physical education. Principal of both countries have positive view towards Physical education. Hence the hypothesis stated earlier was accepted

Attitudes of Teacher- From the result of the study it is clearly visible that there is no significant difference in the opinion of Indian and Thailand teachers towards Physical education. Teachers of both countries have positive view towards Physical education. Hence the hypothesis stated earlier was accepted

Attitudes of Students - From the result of the study it is clearly visible that there is no significant difference in the opinion of Indian and Thailand students towards Physical education. Students of both countries have positive view towards Physical education. Hence the hypothesis stated earlier was accepted.

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ATTITUDE OF PRINCIPALS, TEACHERS AND STUDENTS OF INDIA AND THAILAND TOWARDS A QUESTION

“Physical Education activities provide no opportunities for learning to control the emotions”.

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ABSTRACT

The purpose of the study was to compare the attitude of the principals, teachers and secondary school students of Thailand and India towards Physical Education (Physical Education activities provide no opportunities for learning to control the emotions). It is decided to find out their opinion through a WEAR ATTITUDE INVENTORY EQUIVALENT FORM-A QUESTIONNAIRE FOR THE STUDY OF PHYSICAL EDUCATION ATTITUDE SCALES. It was hypothesized that the participants (principals, teachers and secondary school students) of India and Thailand have positive attitude towards Physical education. The study was restricted to the participants of secondary school Principals, Teachers and Students of India and Thailand. The investigator administered the WEAR ATTITUDE INVENTORY EQUIVALENT FORM-A QUESTIONNAIRE FOR THE STUDY OF PHYSICAL EDUCATION ATTITUDE SCALES which consists of 30 questions on the attitude of Physical education. The questionnaire consists of both negative and positive questions. Answer was to be given in 5 points scale. SA, A,UD, D,SD. Wear inventory attitude test is a standard test for Physical Education. In total, 300 students (150 + 150) , 150 Teachers (75 + 75), 60 Principals (30 + 30) were selected from both countries on at random basis. The scores of the Question indicate that the opinion of Indian Principals and Thailand principals are not in the same direction i.e. The Principals of both countries disagree that “Physical Education activities provide no opportunities for learning to control the emotions”. **T** value of the comparison was 3.496 and Pearson’s Correlation value was 0.057 at 0.05 level of significance. The scores of the Question indicate that the opinion of Indian and Thailand teachers are not in the same direction i.e. the teachers of both countries disagree that “Physical Education activities provide no opportunities for learning to control the emotions”. **T** value of the comparison was -2.513 and Pearson’s Correlation value was 0.249 at 0.05 level of significance. The scores of the Question indicate that the opinion of Indian student and Thailand students are in same direction i.e. Students from both countries disagree that “Physical Education activities provide no opportunities for learning to control the emotions”. **T** value of the comparison was 1.323 and Pearson’s Correlation value was -0.020 at 0.05 level of significance.

Keywords: Attitude, Physical Education, Principals, Teachers, Students, t-test, Correlation,.

INTRODUCTION

Regular physical exercise is extremely important for maintaining a healthy body, improving psychological well-being, and preventing diseases such as diabetes, obesity, hypertension, and heart disease. Despite the well-known health benefits of fitness and exercise, most of the adults, as well as children, are not striving hard enough to achieve them. Health-care specialists and researchers talk about lack of exercise as an epidemic due to unhealthy lifestyle, dietary changes, lack of physical activities and overweight. Nationwide surveys show that children are not at appropriate fitness level associated with health standards. Despite the well-known health benefits of fitness and exercise, most of the adults, as well as children, are not active enough to achieve them. Health-care specialists and researchers talk about lack of exercise as an epidemic due to unhealthy lifestyle, dietary changes, lack of physical activity and overweight.

It was believed that attitudes which arouse behavior and sustain or terminate an activity and progress, they regulate an organized behavior and they lead to the acquisition of motives and stable disposition to act. In support of this, several attempts have been made to identify teachers or students' attitudes towards teaching and learning of physical education as a science subject but no much positive results has been achieved. It is stated that researchers should as a matter of urgency investigate some means by which desirable changes in the attitudes of principals; teachers and students could be fostered and induced for the acceptance of physical education as an academic subject. Academic scholars may concur with the scholar that the objectives of any science curricular includes fostering favorable attitudes towards science and imparting cognitive knowledge which physical education as a science course is doing in this time.

MATERIAL AND METHOD

Participants: In total, 300 students (150 + 150) , 150 Teachers (75 + 75), 60 Principals (30 + 30) were selected from both countries on at random basis.

Measures: The investigator administered the WEAR ATTITUDE INVENTORY EQUIVALENT FORM-A QUESTIONNAIRE FOR THE STUDY OF PHYSICAL EDUCATION ATTITUDE SCALES which consists of 30 questions on the attititude of Physical education. The questionnaire consists of both negative and positive questions. Answer was to be given in 5 points scale. SA, A, UD, D, SD. Wear inventory attitude test is a standard test for Physical Education

Statistical Techniques

In order to examine the hypothesis of the study, descriptive statistics such as mean, standard deviation, minimum and maximum correlation coefficient was used. In order to establish the relationship, Pearson Product Moment Correlation Coefficient (r) was used. In order to compare the subjects of India and Thailand, 'T' Test was employed and the level of significance was set at 0.05.

RESULTS

After the data were obtained on of selected attitude variables, the subjects of all the groups were compared and correlated on selected attitude variable. The results of analysis are presented in Table 1, 2, 3 & 4.

Table no 1

Frequency distribution of responses of Indian and Thailand subjects towards the Question
"Physical Education activities provide no opportunities for learning to control the emotions".

	Country	Opinion	Frequency	Percentage
Principal	India	4	8	26.7
		5	22	73.3
		Total	30	100
	Thailand	3	1	3.3
		4	19	63.3
		5	10	33.3
		Total	30	100
Teacher	India	1	22	29.3
		2	46	61.3
		3	7	9.3
		Total	75	100
	Thailand	1	16	21.3
		2	41	54.7
		3	18	24.0

		Total	75	100
Student	India	3	1	.7
		4	61	40.7
		5	88	58.7
		Total	150	100
	Thailand	2	2	1.3
		3	3	2.0
		4	64	42.7
		5	81	54.0
		Total	150	100

Table no 2

T-Test

India V/S Thailand	**Pair Difference**								
	Mean	**Std. Deviation**	**Std. Error Mean**	**95% Confidence Interval of the Difference**		**T value**	**DF**	**Sig. (2-tailed)**	
				Lower	**Upper**				
Principal	.43333	.67891	.12395	.17982	.68684	3.496	29	.002	
Teachers	-.22667	.78108	.09019	-.40638	-.04696	-2.513	74	.014	
Students	.08667	.80215	.06550	-.04275	.21609	1.323	149	.188	

Table no 3

Paired Samples Statistics

India V/S Thailand	Country	Mean	N	Std. Deviation	Std. Error Mean
Principals	India	4.7333	30	.44978	.08212
	Thailand	4.3000	30	.53498	.09767
Teachers	India	1.8000	75	.59275	.06844
	Thailand	2.0267	75	.67730	.07821
Students	India	4.5800	150	.50858	.04153
	Thailand	4.4933	150	.61028	.04983

Table no 4

Paired Samples Correlations

India & Thailand	N	Correlation	Sig.
Principals	30	.057	.764
Teachers	75	**.249**	**.031**
Students	150	-.020	.809

INTERPRETATION

Table 1 indicates the frequency distribution of response of Indian subjects and Thailand subjects (Indian Principals V/S Thailand Principals, Indian Teachers V/S Thailand Teachers and Indian Students V/S Thailand students) towards the Question.

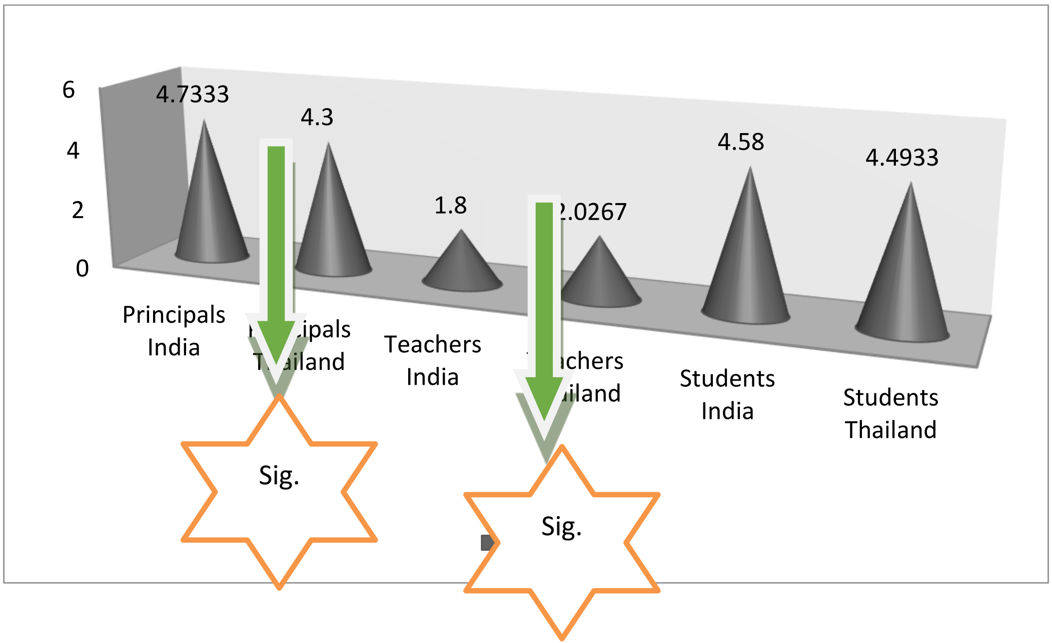
Table 2 indicates that for the Question (**Physical Education activities provide no opportunities for learning to control the emotions.**) significant difference was found among the opinion of principals and teachers of both countries, however **no significant difference** was found among the opinion of students of both countries towards this question.

T value of this question was (3.496), (-2.513) and (1.323) & P value was (**.002**), (**.014**) and (.188) for the Principals, Teachers and Students of both countries, respectively. Level of significance was tested at 0.05. i.e. if the score is less than 0.05 there was a significant difference in opinion ,or vice versa.

Table 3 indicates the mean and standard deviation between the opinion of principals, teachers and students of both countries.

Table 4 indicates that the Pearson's Correlation value **(0.057**) and (0.**249**) is insignificant at 0.05 level of significance i.e. there is no significant relationship between the opinion of Indian principals and Thailand principals and Indian Teachers and Thailand teachers, respectively. However Table 4 also indicates that the Pearson's Correlation value **(-0.20**) is significant at 0 .05 level of significance i.e. there is significant relationship between the opinion of Indian students and Thailand students.

Figure 2



Comparative Attitude towards Physical Education

DISCUSSION OF FINDINGS

Attitudes of Principals of India and Thailand towards Physical education*, Results shows that they have a difference of opinion towards physical education in their respective countries.*

Attitudes of Teachers of India and Thailand towards Physical education, *Result shows that they have a difference of opinion towards physical education in their respective countries*

i.e. the teachers of India and Thailand, disagree that Physical Education activities provide no opportunities for learning to control the emotions.

Attitudes of Students of India and Thailand towards Physical education. *After the analysis of data it is found that there is no significance difference between the attitude of students of India and the students of Thailand.*

Discussion of Hypothesis:-

Attitudes of Principals *-From the result of the study it is clearly visible that there is significant difference in the opinion of Indian and Thailand principal towards Physical education. Principal of both countries have positive view towards Physical education. Hence the hypothesis stated earlier was rejected*

Attitudes of Teacher-*From the result of the study it is clearly visible that there is significant difference in the opinion of Indian and Thailand teachers towards Physical education. Teachers of both countries have positive view towards Physical education. Hence the hypothesis stated earlier was rejected.*

Attitudes of Students *-From the result of the study it is clearly visible that there is no significant difference in the opinion of Indian and Thailand students towards Physical education. Students of both countries have positive view towards Physical education. Hence the hypothesis stated earlier was accepted.*

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PARENT'S EDUCATION: A DETERMINANTS OF THEIR DAUGHTER'S HEALTH

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ABSTRACT

The main aspects of study draw the attention of parent's educational status, which shows their academic qualification and health of their daughters. The subjects were randomly selected 300 college students of Tonk district and their respective parents. There are two components used, first one is socio - economic status index and second one is physical fitness test. To collect the educational data of parents socio- economic status index was used and with the two test item physical fitness test was examined i.e. Body composition (sum of triceps and sub scapular skin test) and low back hamstring muscles skeletal function (modified sit and reach test) for the analysis of data chi- square test was considered to acknowledge the influence and Pearson's product moment correlation to get the relationship. The whole data shows that status of education did not have influence on the health of their daughter.

KEYWORDS: Socio- Economic status, Educational qualification, physical fitness and health.

INTRODUCTION

In the Modern Life Style its tough task to maintain the life cycle, we should physically healthy, mentally alert and socially sound. Fitness is compulsion for everyone who needs to lead up a comfortable and productive life. Fitness cannot be achieved easily. Modern people live in world of illusion where success is based on the psychological abilities. The development of human behaviour personality expressed their activity through inter- personal relationship between physical and psychological factor. Physical activity is integral fact and part of society with variation of nation, community, and group. Physical activity is a part of life from early to present for all people. It also responds by international influence and affectsall culture of nation. On the demand of society we focused on the physical activity with collecting the scientific and psychological information about people. Relationships of society and sports influence each others. Sports and their performance present the trends and patterns of the society. The factor that affects the social health of Athletes is their family. For a sports person their family is first factors after the coach to encourage for sports. Sports play the role of safety-valve and developed right attitude for the ruling class, by nineteenth Century College going girls shown healthier relation with sports. Gymnastics and physical education become important part of the education programme. By the time eighteenth century soft beauty changed into beauty of "Perfect health and high spirit." By the begging of the twentieth century woman's started to take part in sports to be the mark of their "real emancipation."

The giant step of the Pierre De Coubertin, while reviving the Olympic Games defined "women have but one task that of crowing the winners with garlands." To make languages, art, science, and sports seems male oriented in the Indian society indicates a negative attitude. Women role in the sports participation is very low in India. Girls who want to go with the sports they are not allowed to do so by their parents or elders. Parents and society hold the view that nursing, rearing child, bearing is the role women have. In Indian society girls are only liability. Society has to confess that from primitive age to Modern era, women treated as second class citizens. Society pressure makes them submissive as compared to the male. Now a day's everyone has understood the importance of a physical fitness. It play important role in the participation of girls and boys both. It develops higher range of self-esteem. Sports can build positive image and self-confidence, which links to lower level of depression.

MATERIAL AND METHODS

Participants: For the study 1000 subjects were selected randomly. Study subjects selected 5000 students and parents. Students from Tonk District College going girls were taken. Atmosphere of college campus is same for all but family background of students are different. They belong to different country, culture and community.

Measure: Physical fitness test was conducted for students and Socio-Economic status Index was completed by parents. Physical fitness test consist of two test item, Body composition (leanness/fatness) sum of triceps and sub-Musculoskeletal Function i.e. Bent Knee Sit-Ups(60Sec) and Sit and Reach Test.

Statistical Techniques: Chi Square method is used to assess the influence of educational status of the parents on health related physical fitness of daughter. Pearson's Product Moment Correlation method was used to know relationship of educations status of the parents and health related physical fitness of the daughter.

RESULT

As per the purpose of this study, to assess the influence of daughter's health related physical fitness to the educational status of their parents', the chi square (X2) method was used. To assess the relationship of daughter's health related physical fitness to the educational status of their parents', the Pearson's product moment correlation method was used. The results are presented in Table 1.1-1.6.

TABLE NO. 1.1

FREQUENCY DISTRIBUTION OF EDUCATIONAL STATUS OF PARENTS V/S SIT AND REACH ABILITY OF THEIR DAUGHTERS:

Educational status of parents'	Sit and Reach Ability of Daughters					Total
	0-20 (Poor)	20-40 (Average)	40-60 (Good)	60-80 (Good)	80-100 (Excellent)	
0-5 (lower edu.)	44	6	7	1	1	56
5-10 (middle edu.)	234	32	29	5	5	305
10-15 (higher edu.)	106	14	12	4	0	136
Total	384	52	48	10	6	500

TABLE NO. 1.2

CHI-SQAURE-TEST

	Value	df	Asymp. Sig. (2-sided)
Pearson chi - square	3.543a	8	.896

TABLE NO. 1.3

CORRELATION

	'r'	Std. Error	Approx.	Sig.
Pearson's R	-.032	.044	-.717	.474

The scores of the table 1.1 indicates that out of 305 students of several courses in the university, whose parents' were having education up to middle level, 266 student's (234+32) sit & reach ability falls under the category of below average. Only 34 students (29+5) were having sit and reach ability falling under the category of very good, which is 11.1 %, which is not upto the remarkable level. The table 1.2 indicates that the chi-square value of respondents' sit & reach ability is not affected by their parents; educational status i.e. respondents' chi-square value is insignificant. The table 1.3 indicates that the Pearson's correlation value (R) also favours the result of chi-square test of independent.

TABLE NO. 1.4

FREQUENCY DISTRIBUTION OF EDUCATIONAL STATUS OF PARENTS V/S SIT AND REACH ABILITY OF THEIR DAUGHTERS:

Edu. Status of Parents’	Body Composition of Daughters					Total
	0-20 (Poor)	20-40 (Average)	40-60 (Good)	60-80 (Good)	80-100 (excellent)	
0-5 (Lower Edu.)	42	4	10	3	0	59
5-10 (Middle Edu.)	216	40	27	14	8	305
10-15 (Higher Edu.)	96	21	11	8	0	136
Total	356	65	48	25	8	500

TABLE 1.5

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Sqaure	11.653	8	.168

TABLE 1.6

		Value	Asymp. Std Error	Approx. Tb	Approx. Sig.
Interval by Interval	Pearson’s R	-.025	.042	-.555	.579

The score of table 1.6 indicates that out of 305 students of several courses in the college, whose parents were having their education up to the middle level, 256 students (216+40) body composition falls under the category of below average. Only 41 students (27+14)were having body composition falling under the category of very good, which is 13.4%, which is not up to the remarkable level.

The table 1.6 indicates S that the x2 statistic value of the respondent’s body composition is not affected by their parent’s educational status i.e. respondent’s X2 value is insignificant. The table 1.6 indicates S that the Pearson’s Correlation value (R) also favours the results of X2 test of independent.

DISCUSSION

The data of the Chi-Square test indicates that the educational statue of the parents, which shows their academics qualification, did not have any influence on the low-back hamstring musculoskeletal flexibility (Sit and Reach) ability. The findings also show that there was no significant relationship between Sit and reach ability and Body Composition. The result of the study is similar to the results of the study conducted by Yang Lin, Telama, Risto, Lauri, and Laakso (6).

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SCENARIO OF SPORTS IN INDIA- FROM ANCIENT PERIOD TO MODERN PERIOD

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Abstract

The history of the sports in India can be traced back to the ancient time of Vedic era. At that time, sports were concerned or used for the development of the physique and for the defence. It is well said that "a healthy mind resides in a healthy body" with this we can recognised the importance of games in our life. India was one of the most developed countries in the ancient period. It gave many games and sports to the world and also accepts the modernised or improved version of them from the world. India has a rich heritage of different sports activities which can be found in archaeological excavations of Mohenjo-Daro and Harappa, the Vedic literature and the other epics and the literature works of different culture.According to Simon Jenkins, sport is 'A subset of leisure and work activities that involves both physical activity and competition'.Sport is an activity which involves physical exertion and skill in which an individual or team competes against another or others.

Keywords-sports and games, physical, ancient period, archaeological excavations.

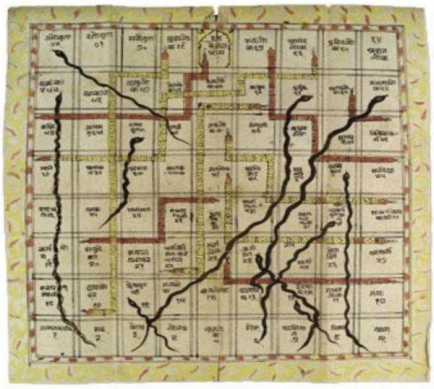
INTRODUCTION

India has evolved a number of games. The games like chess, snakes and ladders, playing card, racing, polo, judo had originated as sports in India and it was a gift to the world. Initially these around were started in India but they were modernized by other countries. In India sports refers to the large variety of games played in India, from tribal games that was originated from the ancient time to the modern sports such as cricket, badminton, football etc. India's diversity in terms of culture, religion and people is reflected in the wide variety of sporting disciplines in the country. We can see this evolution in terms of the different time period that the country has gone through.

ANCIENT PERIOD

- During the Vedic period the chariot racing and wrestling were very famous. Apart from this a number of games like- hide and seek, swinging were played by both men and women. At that time women received equality as men so there were no differences between them related to sports. In the late Vedic era, the yoga and meditation were also started and acquire the seat of spiritualism all over the world.

- The favourite recreations of the Vedic period were **hunting, taming elephants,dancing,and music and gambling**. Gambling was so popular in ancient India that a gambling hall attached to the palace of the king. Thus the ancient Indian Scriptures exhibit a very developed knowledge of the games.
- The history of sports in India wasalso evident in the Indian epics like **RAMAYANA AND MAHABHARATA**. During the period of Ramayana, **hunting, archery, horse riding, swimming were royal games**. Even lord Ram himself was known for his mastery in **Archery, horse and the chariots.** Ayodhya, kiskindha and lanka were the centres of many games and sports.
- Mahabharata made a mark in the sports like **dicing, gymnastics, wrestling,shatranj etc.Throwing and lifting of weights, swimming and water sports**, comprehensive physical activities were played by the men and women during this period. The 100 kauravas and 5 panadavs played various kinds of games of strength, skill and amusement.
- **CHATURANGA** was very famous during this time. From there it spread to the rest of the world and now it is known as **CHESS.** Lord Krishna played Gullidanada at the bank of Yamuna. Arjuna was the hero in the Archery and shooting. So, during this time people took much interest in the sports.
- Universities like **Takshila andNalanda** was established during this time. These universities were famous for military training, wrestling and mountain climbing. Archery was found mentioned in the JATAKA stories. The BHIMSENA JATAKA tells that BODDISATVA learnt archery at Takshila. Subjects like **DHANU VEDA** or the science of archery was part of their studies and people around the world came there to study and learn about them. The YOGA was developed at that time and became an important and integral part of the daily life of the people at that time. The BHAGWATGITA also considered it as **YOGASASTRA.**



BHUDDHISM

When we talk about the history of Indian sports, Buddhism has been vital role in spreading the culture of sports in India. Gautama Buddha, himself was master at Archery and Hammer throwing. Manas Olhas- a classic written by Chalukya nearly 850 years ago mentioned about **Mallakhamb**(in which a gymnast performs aerial yoga postures and wrestling grip with a vertical stationary or hanging pole, cane or rope**), archery (Dhanurvidya), duels with weapons (Anka Vinoda) and game played on horses.**

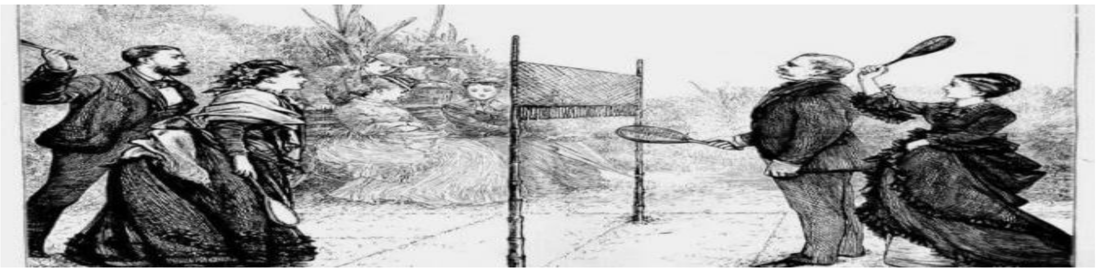
MUGHAL PERIOD

Even when Mughals came to India they brought the game with them which became popular with many royalties. The military and physical sports were popular with active soldier. The game of **Polo** was introduced in India by Mughals became popular among all the classes. It gained popularity with the coming of Afghans. People also took keen interest in horse racing. In fact various studies were made during the medieval times related to the habits, food and nourishment of the horses. Apart from **Polo and horse riding, wrestling, boxers, fencing, arrow shooting** and other sports were very popularly played at that time.

BRITISH PERIOD

Even when the Britishers entered into India and ruled over it and destroyed the resources of the country, the development of sports never stopped. Many sports were introduced in India and many sports were modernised in India.Cricket was the first game that was introduced in India under the British rule. One of the oldest football club named **Mohun Bagan was established in India in 1889 AD**. India became the port of different games and has been world champion at that point in various sports like **Kabbadi, chess, hockey, cricket, badminton and Billiard**.India first competed in Olympics in 1900. Norman Gilbert competed in the first Olympic and won 2 silver medal.Indian National field hockey team was the first non European team to be part of international hockey federation. Indian men’s hockey team was the most successful team at the Olympic Games.Manipur was considered as the origin of modern Polo. Polo was introduced to the British cavalry regiment in India.

India had a vast history in field of sports at the British period and the Indian athletes still carrying this heritage and made the nation proud by winning the medals and hearts at the international level.



Post Independence

India got independent in 1947 and after that Government of India took various steps to improve the quality and status of sports.

“**Tara chand committee”** was established especially for looking in this field in 1948. This committee gave various recommendations to improve the condition of sports and physical education in India.

Other committees and boards like All India Council of Sports (1954), National Sports Policy (1980), National Sports bill (2011) was appointed especially for the development of sports.

In 1951 and 1982, India hosted the Asian games in New Delhi. The current Ministry of Youth Affairs and Sports was initially set up as the Department of Sports in 1982. India also hosted various international sports events **in 1987, 1996 and 2011 cricket World cup, the 2003 Afro- Asian games, the 2010 Hockey World cup and 2010commonwealth Games.**

Modern period

Indian sports has experienced a vast change in every aspect be it in terms of popularity, reach and consumption. Those days are gone when only passionate people would follow sports. Today, sports have become amajor source of cutting edge entertainment. Various institutes were opened to provide the bachelor and master degree in sports to enhance the career opportunities of the people in the sports. Indian sport has experienced a vast change over the past few years. Today sports become a major source of entertainment. A major promoter of this is the change because of private league culture. **Indian Premier League (IPL)** comes into the emergence in India. IPL has a huge fan base. **The Premier Badminton League, Pro Kabbadi League etc are just few examples.**

According to the Economic Times, the pro kabbadi league which was formed in 2014 managed to attract 397millions viewers in 2018. The new pro volleyball leagues managed to attract 147 million viewers in its first edition, according to the organisers.

In this modern digital world, the one thing that has changed the way people follow sports is the digital revolution. People watch their favourite sports through Indian sports websites and through other online streaming routes.

According to the Star India- 202millions people watched 2018 edition of IPL on Hotstar .This shows how the consumption pattern is changing in India.

CONCLUSION

Sports have travelled a long journey on the way of upliftment in the Indian society. A sport is basically a social activity which can be best understood from the perspective of sociological history. Sports history shows us how sports are connected with the greater society. In highlighting the evolution of sports in India an attempt has been made to understand the social construction of sports during the different time period of India. Sports were looked upon as an important activity for the holistic development of humans. It has benefits to begin with keeping the mind and the body fit. It also entertains both the player as well as the viewers. Sports also bring the people together and create a sense of unity among them. India with its rich history of sports forms an important part of the cultural mosaic. Many games were started and many were transformed, many were extinct and many are in still practice in this country. Today sports in India have achieved a mark in terms of popularity. Cricket, football, hockey, badminton, kabaddi, archery, basketball etc have been deep seated into the Indian psyche. Sports in India have paved a long way towards the road of success and have made a mark in the world of sports.

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SPORTS EVENT MANAGEMENT IN INDIA

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ABSTRACT

Sports event whose concept came in 1950's in India when the Asian Game was hosted in New Delhi from where the establishment of sporting event management started. It was designed for the continuous and proper monitoring of sports and event management with the purpose of understanding the upsetting growth in sports event management in Indian Economy. This research explores and describes the concise overview of various popular sports events in India and how they organized. Sport management includes any combination of principles related to planning, organizing, directing, budgeting, advertising, leading and evaluating with the reference to organization whose primary service is related with sports (DeSensi, Kelley, Blanton and Beitel, 2003). The major advantage of sports event management is to planning,organizing, advertisingthe skills to envision and execute the sporting event. Various sporting events have been highlighted such as Olympic Games and other similar events and a brief description on Indian premier league (IPL)and Pro Kabaddi League (PKL) and their growth scenario.

Keywords: Sports events Management, qualitative research, Indian premier league, pro kabaddi league

INTRODUCTION

Plethora of principles related to planning, organizing, leading, advertising and delivering sports events in effective and efficient way. The aspect of sports event management highlights the sports event timelines and provides hospitality to sponsors and peoples and others. Sports management includes sport manager, recreational sports managers, sports marketing, event marketing and sports economic, finance, information etc.

Sports Event- a contest in which people, machines or animal compete as a team or individual with the aim of winning the competition or contest.

Management- it refers tofunctional principle related to planning, organizing, directing and controlling and applied it on human, financial , physical and informational resource effectively and efficiently to achieve standard goals.

VARIOUS SPORTS EVENTS IN INDIA:

In India a large variety of games are played from tribal games to mainstream sports. Many international sporting events are hosted and co-hosted in India in 1987, 1996 and 2011 **Cricket world cups**. Cricket is the popular sport in India and the countryhosted and won cricket world cups. In 1951 and 1982 **Asian Games** has been hosted in India. Popular Indian sports are football, badminton, shooting, wrestling, tennis, weightlifting, gymnastic, volleyball, table tennis etc and indigenous popular sports includes chess, kho-kho, snooker etc.

Commonwealth Games- in 2010 the commonwealth game has hosted in India where Hockey is the most successful sport for India as Indian men's team has won eight gold medals.

Some wide sports events are:-

- Indian Premier League
- Pro Kabaddi League
- Indian Super League
- Ranji Trophy
- Indian Grand Prix
- Hockey India League
- Premium Futsal
- I league
- National Games

Sports Event Management generally refers to as special events where we promote the sports and sponsorship which includes site selection, event logistics, event scheduling, risk management and event evaluation. Various major steps are followed to manage the flow of work and complete the work on time by event planners for effectively managing the sports event.

First step includes planning stage where the event goals are defined after that budget was estimated and theme, branding, uniforms, guest list, logistic, invitations, sponsorship, awards and other event related all aspects were defined. After planning the next

Second step includes Marketing which includes the plans and strategies to market the events and to reach more audience through local media, direct mail, merchandising and national media and other tactics for the event.

Third step big event day which start with rehearsals, site mapping, operation manual, stage area, rain and adverse method checked, entry and exist, lost and found counters, parking and special facilities checked for participants such as changing rooms, showers, staff facilities, space, and food.

Top sports event management companies in India-

Planet Jashn, Star TV, Sports Live, IMG, Baseline Venture,U sports, sports consult, ABC sports, BE sports, Front Foot, TSC Asia.

IPL(Indian Premier League)A case study

IPL is the professional league for Twenty20 cricket championship in India. It was started by the Board of Control for cricket in India; Its headquarters is in Mumbai and supervised by BCCI vice president Rajeev Shula who was the chairman and commissioner of the IPL.it is currently stated by nine teams consisting players from all over the world. It was started after a disagreement between BCCI and the Indian Cricket League. In 2010 IPL was the first sporting event broadcast live on You Tube, IPL work as a franchise-system based on American style of hiring and transfer. The franchise put for auction and the highest bidder won and has rights to own the team. The IPL auction ahead of 2020 season will see a total number of 332 cricketers will go under the hammer. These cricketers have been shortlisted from a total of 971 entries for the event. Total of 186 Indian cricketers are shortlisted to go under the hammer. the highest base price on which the selected group of players have listed themselves for, is INR 2 crore. This list includes international cricketers like Glenn Maxwell, Dale Steyn, Mitchell Marsh, Pat Cummins, Angelo Mathews and josh Hazlewood. The highest paid IPL players from each of eight IPL teams – Virat kohli (RCB)- INR 17 crore, MS Dhoni(CSK)-INR 15 crore, Rohit Sharma(Mumbai Indians)- INR 15 crore, Rishabh Pant(Delhi Capitals)- INR 15 crore, David Warner(Sunrisers Hyderabad)-INR 12.5 crore, Ben Stokes and Steve Smith (Rajasthan Royals)-INR 12.5crore, Sunil Nariane- INR 12.5 crore, KL Rahul (Kings XI Punjab)- INR 11 crore.

INTERNATIONAL MANAGEMENT GROUP of IPL

IMG is the backbone of Indian Premium League over the past 10 years; IMG has won the bid to retained event rights and multimillion holder tournaments. Advertising revenue and ticket sales have exceeded all the expectations, making IPL highly profitable broadcasters and organizer. Event hostility for visiting teams and all other facilities are organized. Business model of IPL include four components such as Franchise, players and team official, sponsorship, television right and unpaired and match officials.

PRO KABADDI

The Indian sports scenario is often seen overshadowed by two most charging sports- cricket and football; but one may not forgot indigenous sports like kabaddi. Apart from IPL, Pro kabaddi has also entered to race. Nowadays it is one of the most unique sports events which involve national teams.

The VIVO Pro Kabaddi League was started in the year 2014 and it has seen a remarkable growth with each passing years. It is accepted by the audience which shows that India would never let go of its tradition. This league has a massive sports event and a planning, implementing and directing an event is not a very hardworking task. But if a specialized event management trainee or manager added their skills to task then the large scale event pilled out smoothly. The student of national academy of media and events, the institute of training event management students also worked with pro kabaddi team. The success of IPL tournament increased many competitions in other sports.

THE TEAM AT A GLANCE

INDIAN PREMIER LEAGUE TEAM	PRO KABADDI TEAM
• Chennai Super Kings	• Bengal Warriors
• Delhi Capitals	• Bengaluru Bulls
• King XI Punjab	• Dabang Delhi
• Kolkata Knight Riders	• Gujarat Fortunegiants
• Mumbai Indians	• Haryana Steelers
• Rajasthan royals	• Jaipur Pink Panthers
• Royal Challengers Bangalore	• Patna Pirates
• Sunrises Hyderabad	• Puneri Paltan
	• Tamil Thalaivas
	• Telgue Titans
	• U Mumba

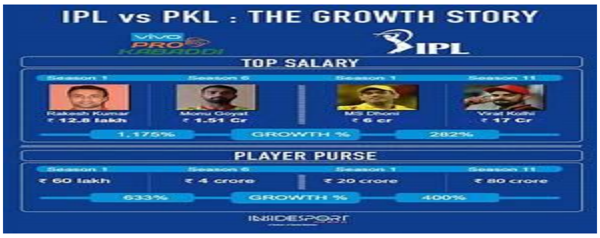
The Dabang Delhi Team was owned by Radha kapoor (DoIT Sports Management India Pvt. Ltd),Jaipur pink Panther was owned by Abhishek Bacchan and managed by GS Worldwide Entertainment, Gujarat Fortunegiants team was owned by Gautam Adani (Adani Wilmar Lmt.), Bengal Warriors team was owned by kishore biyani, Benguluru bulls team was owned by Kosmik Global Media Pvt. Lmt and the production company was owned by Uday sinh, Telgue Titans Team was owned by Veera sports, Haryana Steelers was owned by ISW Sports, Sajjan Jindal , UP Yodha team was owned by GMR Group, Tamil Thalvivas team was owned by Sachin Tendulkar, Nimmagadda Prasad, Allu Arjun, Ram Charan. U Mumba team was owned by Ronnie Screwvale and insureket sports, Puneri Paltan team was owned by Unilazer Venture Pvt. Lmt. Group, Patna Pirates Team was owned by Rajeshah and KVS energy sports lmt.

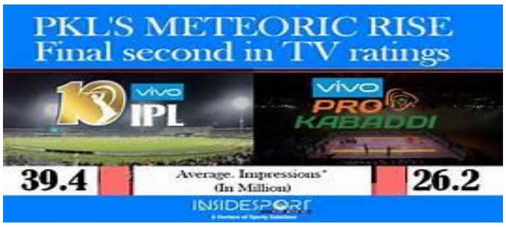
Most popular sports league PKL is all set for the Seventh seasonand the auction will take place on 8 and 9 April 2020. Each has the option of retaining a maximum of 6 players who have selected throught the FKHP (Future Kabaddi Heroes Programme). This upcoming auction will focus on bringing more young players into the fray as teams can bid for maximum of six New young players that come through FKHP 2019.

In 12th season of the IPL in which eight team are scheduled to play. Every team’s franchise has been brought by IPL owners itself. Here is the list of IPL Owners.

- The Chennai Super Kings owner is N. Srinivasan(Indian Cements)
- Delhi Capital owner is (Sajjan Jindal)GMR Group and JSW Group,
- Kings XI Punjab owner is PrietyZinta, Ness Wadia, Mohit Burman, Karan Paul.
- Kolkata Knight Riders (KKR) owner is Shahrukh khan, Juhi Chawla, Jay Mehta
- Mumbai Indians owner Nita Ambani (Reliance Industries)
- Rajasthan Royals owner is Manoj Badale
- Royal Challengers Banglore owner is United Spirits Limited – DIAGEO
- Sunrise Hyderabad owner is Kalanithi Maran(Sun Network)

Pro kabaddi league is leading the sports commercial market with its 300 crore title sponsorship. .the 300 crore title sponsorship is an Indian record for all non cricket professional league as the 60 crore is the highest value. The PKL player’s salaries have seen a greater growth in all six seasons of its existence. The PKL team has gone up from 50 lakhs in 2014 to 4 crore a mere growth of 633%. As Sidharth Desai was bought for a 1.45 crore and Nitin tomar was retained for 1.20 crore by Puneri Paltan. Rahul Chaudhary was sold for 94 lakh rupees and Sandeep Narwal’s price tag was fixed which is89 lakh . In Pro Kabaddi League 2019 the most expensive player was Monu Goyat which heads to UP Yodha for a massive 93 lakh rupees. He bagged 160 raid points in last season in the 20 matches he played. The twelve VIVO Pro Kabaddi franchisees have committed over 50 crore to acquire 200 players from which 173 domestic and 27 foreigners during the two day auction process. Dhoni’s 6 From Mahendra Singh crore top pay purse in 2008 to Virat Kholi’s 17 crore rupees last season. IPL has seen a mere of 282% rise in highest paid player’s salary.





CONCLUSION

Sports Event Management helps in organize the sports events in short interval of time. It is the direct result for the need to employ proper management skills for events and also ensures that the sporting event should begin and ends on schedule. All factors such as logistical management, crowd logistics and event preparation can achieve actively and efficiently.IPL contains various opportunities such as a market opportunity for advertisers and sports brand, long term success lead to a huge fan base of a franchise and there is huge opportunity for merchandising. As there are threats too there are many franchise and they are too expensive. Sports event related to IPL is managed by IMG Company. Pro kabaddi League is on continuous growth in India as there we seen a more rapid growth of Pro Kabaddi League more than IPL. And we have analyses that how PKL is catching up Ipl in today scenario.

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Can we use "body surface area" equation to estimate obesity in young females?

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ABSTRACT

The purpose of this study was to examine body surface area (BSA) based on Mosteller formula (Height [cm] × Weight [kg]/3600)½) to comparison with other equation such as body mass index (BMI), to estimate obesity in young female.

Materials and Methods

Two hundred young female volunteered to participate in the study. Their age ranged from (17 - 22) years, weight ranged from (44 - 85 kg) and height ranged from (152 - 186) cm. The BSA was measured using height and weight (Mosteller equation) and BMI for the study subjects. We used as reference for comparisons between mosteller formula and the reference standard were made with one-way ANOVA and Pearson correlation.

Results

The results of body surface area showed a strong positive correlation with each other and the derived reference body surface area values (0.77–1.00; P < .001). We can predict the obesity in young female with (BMI) by Knowing the "Body Surface Area". So we have found an equation that we can predict the result of obesity through use it $\boldsymbol{BMI = (17.762) \times BSA \pm 6.618}$
Among 200 (female) subjects, 10 (5.0% were underweight), 159 (79.5% were normal & healthy weight), while 21 (10.5 %were Overweight), other while 10 (5.0% were Obese).

Conclusion

The benefits for using BSA equation for female, such as saving time spent on computation, and ease of calculation, we can predict the result of obesity through use it $\boldsymbol{BMI = (17.762) \times BSA \pm 6.618}$ **.** Our recommendation that patients with (obesity) should do aerobic exercise. Therefore what physical activity can play in their prevention and treat.

Key Words: Body surface area, Body mass index, Mosteller formula.

INTRODUCTION

Exercise has historically been considered to be an integral part of a healthy lifestyle. Over recent years, exercise has become more widely used by people suffering from various diseases including heart diseases, diabetes, high blood pressure, obesity, and many others (Pedersen and Saltin, 2015; Warburton and Bredin, 2017). Today, the increasing number of overweight and obese people has been described as epidemic and even pandemic (Swinburn et al., 2011). On the other hand overweight and obesity, are now regarded as one of the main public health challenges by health authorities in most countries around the world especial in Arab world and by the World Health Organization (WHO 2014a).

The term (BSA) **Body surfaces area** refers to the total surface area of the body and is used to calculate drug dosages and medical indicators or assessments. The first formula was developed by Du Bois in 1916 and since then, several others have been developed. The Mosteller formula, which is the easiest to calculate and remember, is the most commonly used formula. The Mosteller formula takes the square root of the height (cm) multiplied by the weight (kg) divided by 3600.

$$BSA(\mathrm{m2}) = \sqrt{\frac{[(height(cm) \times weight(kg)]}{3600}}$$

The average adult BSA is 1.7 m^2 (1.9 m^2 for adult males and 1.6 m^2 for adult females).

It is one of the important measures related to obesity, as the higher the body's surface, the greater the susceptibility to obesity, and it is measured by special devices, or by the Dobbles and Dobbles equation (DeLorenzo & et al., 1999), also, and is one of the known equations for measuring the (BSA) Mosteller’s formula, the Medical Check of Wisconsin (MCW.2003), used the equation for modified Dobbs and Body Surface Measurement (BSA) is: m2 (BSA) = (0.20247) x (body mass kg) 0.425 x (meters in length) 0.725. Different equations for predicting body surface area have been derived. The DuBois and Mosteller body surface area equations are considered equivalent, but the accuracy in adult of height and weight is unknown. (MCW, 2003).

Although Mosteller's formula is recommended based on its simplicity and suitability for laboratory and clinical work in adults, most resercher used Mosteller’s formula in there reasearch such as “Body surface area in normal-weight, overweight, and obese adults”. A comparison study. (Verbraecken J1, Van de Heyning P, et.2006)

Body Mass Index (BMI) is a measure used to determine a person’s degree of overweight. Calculated based on height and weight, 1 BMI is easy to measure, reliable, and correlated with percentage of body fat mass. It is a more accurate estimate of total body fat compared with body weight alone.2 BMI can also help gauge a person’s risk for conditions such as heart disease, high blood pressure, type 2 diabetes, gallstones, respiratory problems, and certain cancers. One downside of measuring BMI alone is that it may overestimate body fat in athletes or people with a muscular build. Conversely, it may underestimate body fat in the elderly or in people who have lost muscle. BMI is calculated by taking the body weight in kilograms (kg) and dividing it by the height in meters (m) squared.

$$BMI = \frac{weight(kg)}{height(m)2}$$

BMI (kg/m^2) is an indicator of weight-for-height. It is used internationally in public health and nutrition surveys to monitor weight status, specifically overweight and obesity. At the extremes of heaviness, BMI is probably a reasonable indicator of fatness in the general population.

If the BMI up to 25 kg/m^2, its mean there's obesity, on the other hand there are many different Standard values about MBI, one of them Centers for Disease Control and Prevention (CDC) Reference Values for Body Mass Index (BMI) (2015) table (1):

Percentile Ranking	Weight Status
Less than 5th percentile	Underweight
5th percentile to less than 85th percentile	Healthy weight
85th percentile to less than 95th percentile	Overweight
Equal to or greater than 95th percentile	Obese

With the increasing number of overweight and obese people, there is a growing public health concern and focus on body size and lifestyle issues, especially in the media. Young adult women comprise a vulnerable group regarding issues of weight balance and appearance.

Overweight and obesity are regarded as dominant causes, and a number of other conditions and negative health markers are associated with increasing body weight (Swinburn & Bell, 2007). In addition, recent studies report how severe obesity is associated with greater all-cause mortality (Flegal, Kit, Orpana, & Graubard, 2013) and how bariatric surgery seems to lower this tendency (Arterburn et al, 2015).

Excessive adiposity and especially abdominal obesity have been associated with risk factors for cardiovascular disease and metabolic syndrome in youth (Reed et al, 2008; Tjonna et al, 2009; Williams et al, 1992). (May et al, 2012) indicate in their study, that More than one cardiovascular disease risk factor (besides body weight) was seen in 49 percent of overweight and 60 percent of obese adolescents. Other studies have confirmed these findings, suggesting that elevated weight status is associated with increased risk for cardiovascular disease (Chang et al, 2008; Jekal et al, 2009), particularly with low cardiorespiratory fitness in children (Carnethon et al, 2005; Lobelo et al, 2010). Markers of metabolic syndrome (a cluster of precursory risk factors) also are associated with elevated childhood weight status (Rizzo et al, 2007). In addition, obese youth have an increased risk for prediabetes compared with nonobese youth (Li et al, 2009).

MATERIAL AND METHOD

A total of two hundred young female student, age ranged from (17 - 22) years, weight ranged from (44 - 85 kg) and length ranged from (152 - 186) cm), participated in the study on volunteer basis after signing a written consent form and being recruited from the Palestine Technical University Khadoorei/Ramallah Branch, Only females from all university-listed programs in equal proportions were allowed to participate in the study.

Study Protocols & the general objectives:

We took length and weight measurements to use in to each equation to compute body surface area data for the study subjects.

Therefore, **the general objectives** of the study are the following:

1- To investigate the levels of body surface area (BSA) on young females according to mosteller equation?
2- To investigate the levels of body mass index (BMI) on young females?
3- To investigate the effect of (BSA) which may influence Obese?

And the main objective of this research is to understand whether we can use the "Body Serves Area" equation to estimate obesity in young females? This may help to answer the question if there is a response to compare the obesity relative on BSA for young female.

Statistical analysis

Data were presented on average ± SD. All statistical analyses were performed using SPSS software (version 20.0; SPSS Inc., Chicago, IL) for Windows. We used the correlation coefficient (R Pearson) to calculate the level of correlation between mosteller formula and the (variables) the reference standard were made with the 1-way ANOVA.

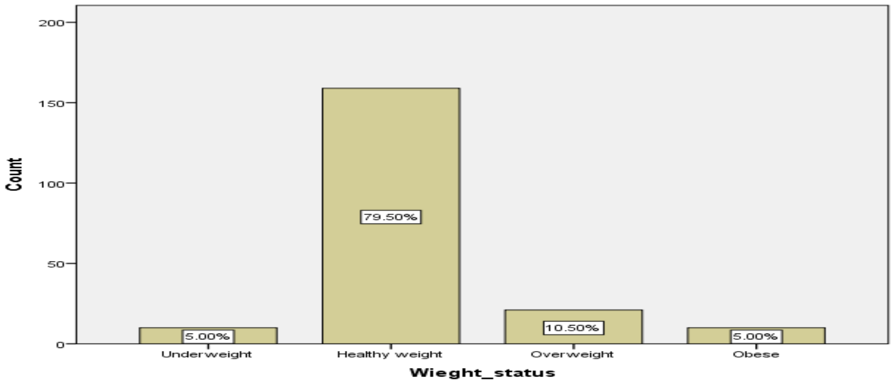
RESULTS

(Table 1 and Table 2) provides the mean values and standard deviations for body mass index (BMI) according to female variables, to check the significance of the differences concerning the two variables in table 2, (Table 2, Figure 1+2).

Table (2.1) Sample Weight Status_Distribution:-

	Frequency	Percent
Underweight	**10**	**5.0**
Normal & Healthy weight	**159**	**79.5**
Overweight	**21**	**10.5**
Obese	**10**	**5.0**
Total	**200**	**100.0**

Figure (1)



(Table 3 and Table 4) Pearson correlation test shows that: there a significant positive relation between tow indications (r = 0.776, p=0.000< 0.05), Coefficient of Determination (R Squared= 0.60) which mean that approximately 60% of the observed variation can be explained by the model (Regression Model) (Table 3), Figure (2)

(Table 4).

Table (3): the correlation between BMI and Mosteller_formula
(Body Surface Area)

Correlation		
		Mosteller_formula (Body Surface Area)
BMI	Pearson Correlation	0.776^{**}
	Sig. (2-tailed)	0.000
	R Square	0.603
	N	200
**. Correlation is significant at the 0.01 level (2-tailed).		

Figure (2)

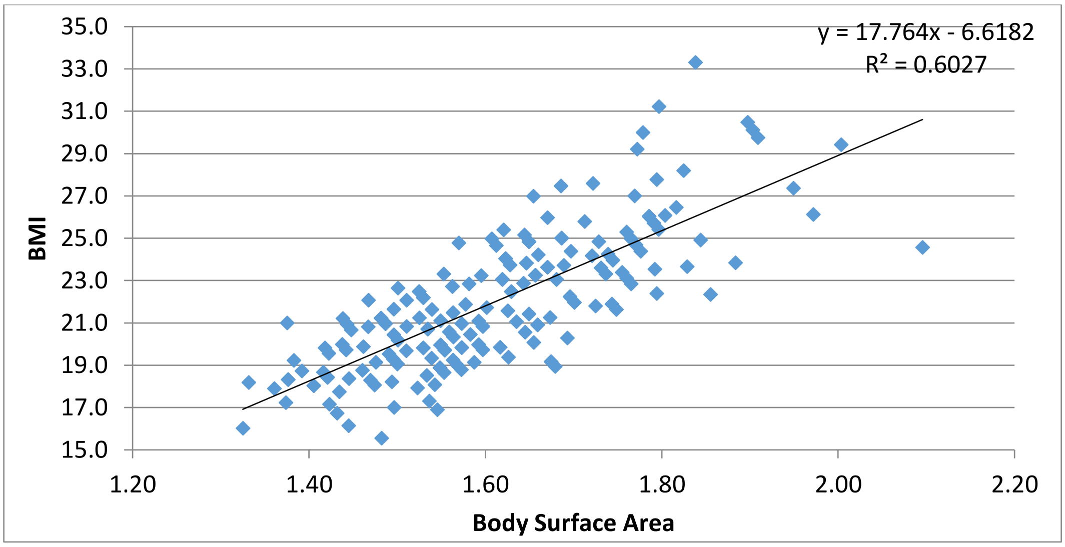


Table (4): Anova analysis.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	1212.691	1	1212.691	300.426	.000[b]
	Residual	799.242	198	4.037		
	Total	2011.933	199			
a. Dependent Variable: BMI						
b. Predictors: (Constant), Mosteller_formula						

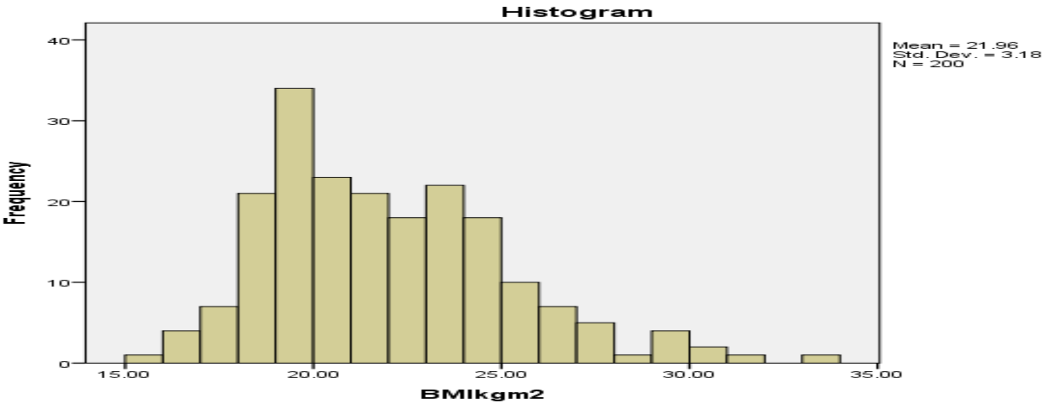
(Table 5) shows the mean values of body surface area and body mass index. We observe and

all calculated body surface area data showed a strong positive correlation with each other and the derived reference body surface area values (0.77–1.00 ; P < .001). Calculated body surface area values for all the formulae were significantly higher in overweight and obese across every age group. (Table 5, Figure2)

Table (5):

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	**-6.618**	1.655		-3.999	.000
Mosteller_formula (Body Surface Area)	**17.764**	1.025	.776	17.333	.000
a. Dependent Variable: BMI					

Figure (3)



Discussion

First of all, Indicators of body composition, specifically adiposity, are determinants of health. Thus the relationship between weight status and risk for cardiovascular disease tends to track from childhood and adolescence into adulthood (Freedman et al., 2001; Herman et al., 2009). For example, changes in BMI and childhood blood pressure were found to be strongly correlated with adult blood pressure in both sexes (Lauer and Clarke, 1989). Based on logistic models developed with BMI data from youth aged 3-20 and adults aged 30-39 in the Fels Longitudinal Study, childhood and adult obesity are related, and the risk becomes stronger in adolescence (Guo et al., 2002). Therefor the physiologic characteristic that affects an individual's ability to carry out daily tasks with vigor. Both body weight (mass) and body fat (absolute fatness and relative fat distribution) are elements of body composition that have implications for health and fitness. It is important to measure weight and height to derive body mass index (BMI), and a high BMI is related to the risk of type 2 diabetes and hypertension. (Fitness Measures and Health Outcomes in Youth 2012) (https://ww bw.ncbi.nlm.nih.gov/books/NBK241316/)

Many of the common equations used for body surface area determination were either introduced before the widespread prevalence of obesity.

This study attempted to follow and answering the question (can use the "Body Serves Area" equation to estimate obesity in young females?. We observe that, the results of 200 (female) subjects show that, 10 (5.0% were underweight), 159 (79.5% were normal & healthy weight), while 21 (10.5 %were Overweight), other while 10 (5.0% were Obese). On the ather hand BSA could be high for one individual but normal for another. Though %BF (Dubois/bsa) and %BF (Livingston) were strongly associated (r (2) = 1.000), some variability was observed on %BF differences using BSA (Dubois/bsa) and BSA (Livingston). These findings suggest that BSA calculation is critical in BF estimation, supporting the use of more accurate equation for non-obese and obese subjects. (Sardinha LBI & Silva AM .2006). On the other hand,

According to our results the need to validate existing formulae for calculating BSA in female and to establish reference values prompted this study. In this regard, Mosteller's and body mass index formulae have been identified as the two most reliable methods for estimation of BSA of female. The study also showed that the BSA values from used newly formula to estimate obesity

$$\boldsymbol{BMI} = (\mathbf{17.762}) \times \boldsymbol{BSA} \pm \mathbf{6.618}$$

In addition, previous studies have suggested the possibility of correct estimation of a females BSA is a necessary step in medical in particular (obesity), This could be clarified in the process of standardization of physiologic indices such as metabolic rate, glomerular filtration rate, cardiac output, and fluid or dehydration ills. Many methods and formulae are in use but these methods are often not being accepted as a precise measurement of BSA on their own merit, rather as techniques which allow comparison between individuals. (AE Orimadegun &AO Omisanjo, 2014)

CONCLUSION

There are many benefits for using BSA equation for female , such as saving time spent on computation, also has the potential to minimize errors that may arise from inaccurate substitution in the use of complex formulae for BSA calculation, finally ease of calculation.

Obesity status is a critical factor in the determination of body surface area values in young female. Body surface area studies utilizing accurate contemporary techniques that include sufficient number of overweight and obese of various races are urgently needed. It is still recommended that patients with (obesity) should do aerobic exercise. Therefore what physical activity can play in their prevention and treat.

This is may be linked either to the increase in obese due to the diabetes a recent study demonstrated that youth with diabetes type1 are more likely to be overweight than their peers without the condition (Liu et al., 2010). However, further studies are needed to validate the clinical application of the equation of reference before it can be recommended on a larger scale.

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PEDAGOGICAL APPROACHES AND PRACTICES OF TEACHING PHYSICAL EDUCATION, HEALTH AND SPORTS IN SELECTED STATE UNIVERSITIES AND COLLEGES

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ABSTRACT

The goal of this study is to draw-out the different pedagogical approaches and current practices of teaching physical education, sports and health in a selected State Universities and colleges and how these approaches and strategies of the program or curriculum address the current status of health and well being can help the community. Most of the PE programs that exist in every school are the physical fitness activities that involve self-testing, rhythmic activities, games and sports that include individual, dual and team sports and recreational activities. With the use descriptive-narrative analysis and thematic analysis, five overall themes that characterized the practices and pedagogies. Pedagogies applied in the areas of PE, health and sports should not only be comprehensive, integrative, sustainable and activity-based, but must continuously evolve to meet the challenges of the fast-changing globalized world. Re-tooling of teachers on the different current trends and curriculum approaches on PE, health and sports including the use of technology. Lastly, training for physical education teachers, to conduct and published research according to their specialization and allocate more budget on the facilities and equipment for the physical fitness activities are recommended.

Keywords: Pedagogical approaches, practices of teaching PE

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INTRODUCTION

The positive effects of sports and physical activities in our lives have been affirmatively acknowledged in a greater manner than ever before and have been considered as a major cultural asset in societies. Chin and Edginton (2014) states that the global perspective and practices on Physical and health states rise in the positive affirmation of sports and physical activity has affected and brought change to the position of physical education and youth sports. Therefore, teachers plays a big role in implementing or creating physical education despite of the perennial problems that exist in teaching environment from no facilities, equipment and lack of support from the administration yet Physical education, health and sports strive to affect one's quality of life by cultivating a healthy body and mind.

Moreover gauging the goals, objectives, up to the content of physical education and youth sports worldwide is inevitability. The continuing reassessment will essentially provide an opportunity to revaluate the current constructed sports culture and suitably provide new directions for physical education curriculum that would reflect current times .The K to 12 or Kindergarten and 12 years of basic education agenda stirred the current educational system with ripples of praise and criticisms from different sectors because of its socio-economic and pedagogical problems (Masayoshi, 2013). Whitehead's (2001) notion of physical literacy includes dimensions of physical competence and spatial awareness, which allows for reading physical space as in knowing where one's body is in space. Therefore, sports and movement literacy, enables a person to understand games and sports with respect to strategies, tactics, rules, values and traditions. The theory of constructivism suggests students create meaning by connecting their ideas with their experiences, both inside the classroom and out (Azzarito & Ennis, 2003 Azzarito, L., & Ennis, C. D. (2003). In the constructivist approach, educators encourage students to create meaning for themselves both individually and in social groups. In addition, the constructivist theories used for the development of the learning experiences include Vygotsky's principles of social construction of meaning and scaffolding, as well as the inquiry-based learning theory. Moreover, constructivism according to Dyson, Griffin, and Hastie (2004) *Sport education, tactical games, and cooperative learning: Theoretical and pedagogical considerations* have three distinct faces, which include the "active learner", the "social learner" and the "creative learner". Additionally, applications in health and physical education pedagogy are available and can be applied to enrich and enhance curricular offerings in most school settings. Numerous technological applications focused on promoting physical activity and fitness that are available and easily accessible. However, application of various technologies will require teacher competencies and practices.

On the other hand, teacher practitioners must look to implementing educational theoretical models that support effective pedagogical approaches so as to ensure that authentic and effective learning and teaching takes place within the Physical Education and sports domains. The goal of this study is to draw-out the different pedagogical approaches and current practices of teaching physical education, sports and health in a selected State Universities and colleges and how these approaches and strategies of the program or curriculum address the current status of health and well being can help the community. In order to provide an opportunity to revaluate the current constructed sports culture and to provide new directions for physical education and youth sports that reflect current times.

Purpose of the study

This study aimed to determined and analyzed the pedagogical approaches of sports and physical education in selected state universities and local colleges in order to provide new directions for physical education and youth sports that reflect current times.

Specifically it seeks to answer the following questions;

1. What are the existing PE and sports program that offers in school?
2. How these programs implemented in your school in terms of;
   2.1. Methods and strategies
   2.2. Process /procedure
3. What are the challenges and opportunities encountered in teaching Physical and Sports Education?

METHOD

The study is qualitative design utilizing the descriptive narrative analysis. The locale of the study was conducted on selected state universities and colleges and local in region 6, 7, 8,11 and 12 in the Philippines.

The total numbers of respondents are 48 physical education teachers that includes physical education department chairs who attended the K-12 training for Senior High School on Grades 11 and 12 new curriculum -HOPE - Health Optimizing Physical Education.

Researcher made questionnaire, and interview guide for the focus group discussion and one on one interview was the main tool in gathering the data.

Permission to the university president and colleges was obtained. Confidentiality was assured since no names will be mentioned anywhere in the report on the findings. The participants would get feedback after the findings of the study. Thematic analysis was used in order to derive themes in order to get the result for deferent methods and strategies.

RESULTS AND DISCUSSION

Every school has a way of dealing in the curriculum in Physical, Health and Sports program considering the government has given a minimum requirement on any programs offered by an institution. These programs were created to meet the competencies expected in students particularly in the tertiary level. Most of the Physical Education program that exist in every schools are the physical fitness activities that involves self-testing, rhythmic activities, games and sports that includes individual, dual and team sports and recreational activities. Through descriptive narrative analysis the themes were segmented into subthemes that described the specific activities done by the respondents.

Existing Physical Education and Sports Program Within the School

Sports Perception to Physical Literacy *(results shows that PE program that exist in every schools are the physical fitness activities that involves self-testing, rhythmic activities, games and sports that includes individual, dual and team sports and recreational activities.)*

They described that the new PE curriculum is about encouraging every learner to become a lifelong healthy individual who achieves and maintains optimum health by engaging different physical activities. It was emphasized how it shift teaching paradigm from sports-dominated physical education to physical activity participation towards physical literacy. Physical Educators worldwide has been supporting the concept of developing physical literacy to students. Giblins et al (2014), physical literacy is engaging the students to be an active participant in various physical activities that suits their capacity and interest in order to attain life-long fitness. Thus, instead of giving much attention to the students who are potential elite's athletes in the institutions, the informants collectively shared that they are now more focus on appreciation of games and sports through non-structured games, fun sport drills and non-competitive games.

Most of the informants expressed that teaching learning should be anchored through the tenets of learning by doing where students need to experience essential activities to learn. As stated by informant 2: *"believed that successful learning is attained since my students are able to experience relevant activities that stimulate their sense. By doing this, the more the person learns and the longer the learning will retain in their life."* This is supported by informant 3, added that, *"I emphasized my teaching through activity in which my students participate actively to the situations, games, drills and sports and bring out learning experiences"*.According to Chapaev et al (2016), activity-based approach processes of learning through the use of activities. He validated that it is a productive means of achieving theoretical and practical consensus in the process of forming students' cognitive activity. Hence, such notion was firmly advocated by the informants of this study. Moreover, PE teachers in different state colleges and universities across Philippine regions have indicated how they take physical education, physical activity and physical literacy particularly seriously in their educational programs.

Dance for fitness. Most of the informants from expressed that their strength in physical education classes is in the field of dance for by introducing modern, contemporary, ballroom and folk dance, most of the informants indicated that they could actually use dance to promote fitness and health. Informant 11 shared that: *"Dance is a tool in which students can use to develop joy and happiness that can revitalize the body, mind, and spirit. Using expressive dance and just merely moving through the beat, students can feel their heart again and discover their inherent joy and freedom."*The informants believe that the body needs to get used to a particular exercise routine so that the desired health status begins to tail off. From the dawn of our history, dancing can provide great benefits to the body's metabolism and health (Jimison, 2017; Heid, 2017). As a general exercise, dancing can bring many known benefits such as improvement in cardio-vascular endurance, balance, flexibility and coordination of the person.

From School Fitness to Community Wellness

According to the informants the objective of Physical Education is not merely confide in developing the overall health of the students but it should trickled down to the family and community. Informants expressed that one of the thrust in teaching the physical education classes is that application of physical literacy towards family and a healthy society.

Aerobic Fitness for the Community- The informant 5, expressed how *Zumba* is seen as an inspiring way to reach out to the community and help more people to feel good about their body and health in general. According to Sima (2016), *Zumb*a is Latin-inspired fitness dance movement performed to promote health and wellness through upbeat music. This contention was actively advocated by the informants due to enjoyable nature of dance workout, which they believed students would really love to do. He elaborated clearly that: *"I would love my students to dance zumba because for many years I have been organizing this as part of community outreach, many who attended including the community said that they liked it and everyone was having a good time and that it made the whole activity fun."*

Sports Clinic towards Children's Exercises -In addition, informant 3 states that , in order to encourage the young people to have active lifesytle and participate to sports activity, they bring the sports to the community where most of them conducted sports clinic for children and out-of-school youths in their respective barangay and municipality. Informant 3 expressed clearly that: *"In my PE class I motivate my students to help the less-privileged community by conducting sports clinic. This is a way to boost young children specially the out of school youth to generate interest in sports and fitness. I also believed that sports can be a strong tool to instill the values of discipline, team work, and leadership for the children to survive as they grow old."* The PE chairman from Regions 7, 9, 11 and 12 also expressed their support toward this kind of cause in order to help the communities. They discussed that they have no problem with giving clearance to their teachers when the activity is for the benefit of many and the teacher has secured all the necessary requirements for the safety of the students and become part extension services in their respective classes.

Methods and techniques tailored behind the PE program

Every child's are privilege to high-quality physical education was the crucial starting point for the group's deliberations. According to the respondents, developing the holistic development of the students is one of the goals of physical education. However due to the limitations and issues behind the implementation of the program teachers still able to tailored the subject by adapting different methods and technique in order to meet the competencies. Among of the strategies mentioned was a ***Feedback for Learning*** -whilst engaging the student with varied activities for learning, they believed that it is not enough to just experience the activity or ***Learning by Doing***. But rather needs a quality feed backing in order for the teacher to grasp and evaluate how suitable the efforts and the whole learning experience reach the desired objective being set. As what Informant 8 stated: *"I never missed in my class the feed backing method every after our activity because it helps me assess how my students achieved the objectives I have set."* According to Stenger (2014) and Saaris (2016), feedback is crucial in learning. In collecting and analyzing performance-based data from the activity, the learner's involvement in the process should not be belittled. Additionally, it also assists the students develop awareness of their learning and recognize their mistakes, which eventually cultivate behaviors for undertaking weak points towards personal improvement.

Challenges and Opportunities

(Physical Education as "Marginalized" Curriculum)

Physical Education curriculum in the present scenario of different colleges and universities faces problems and opportunities in attaining quality physical education, health and sports curricula in their respective institutions. In the interview and focus group discussions, majority of the informants revealed a strong commitment in the fulfilling holistic development of students. However, several problems that is detrimental in attaining their goals. The problems and issues enumerated are the following lack of financial resources , lack of PE teachers, lack of appropriate technology, lack of facilities like there are no gymnasiums or classrooms and equipment. Therefore, quality teaching physical education is sacrificed. In this scenario, requires for every PE teachers to have a change in mind-set especially as to how the subject is valued by students, parents, administrators and stakeholders. Majority of informants expressed that people only care less of physical education curriculum in general because of the long overdue issues and problems that the subject has been facing. In addition, it was specified that these challenges in the implementation of PE would lead to the deteriorating status of physical education. Physical Education's inferior status is evident in many countries worldwide (NASPE, 2013; Kahiga, 2014; Samillano 2015; SHAPE, 2016). Favoring academic subjects with time spent on PE has been perceived as a trade-off to academic achievement. Consequently, if these issues in PE will continue to thrive, various afflicting effects in health and well being like obesity and various health-related diseases will escalate. The informants added that the importance with which the country has approached about the deteriorating health status of the people should be responded, thus, making physical education a more priority subject will motivate significant health and educational attainment benefits for generations to come.

As narrated by Informant 1, *"many people have low regard with physical education. Most of the parents, students and other teachers see the subject as "minor" as compared with the majors subjects like mathematics, science and english".* During the FGD, all expressed that providing physical education more time in the curriculum would give the subject the same status as other academic subjects. Informant 3 stated that: *"by giving much time for PE other than an (1) one hour a week would produce measurable and significant outcomes for making physical literacy as important part of holistic development of students."*

Moreover, the absence of appropriate technology in physical education like pedometers, heart-rate monitors, health tracking devices and applications, fitness assessment databases, physical education department web pages, content-based software programmes, multimedia systems and visual presentation for study of biomechanics has become evident in most of the state colleges and universities in the country. Mohnsen (2006) stated that digital videos, exercise-gaming equipment and other fitness-related devices might be incorporated into daily assignments and unit planning. Posner (2004) added that these approaches include preparing, generating, administering and reporting information such as fitness, stores, class participation or motor skill rubrics, grades for both students and teachers completed more efficiently. However, these technology-based practices are far behind in the present scenario of teaching the physical education, health and sports and are deemed could be detrimental in the quality of teaching the subject considering of the technology based education.

Opportunities

(Creativity and Novelty)

With all the existing challenges that the teachers are encountered in the implementation of the PE curriculum, the data revealed that creativity and novelty was considered as the opportunities in order to cope and be able to implement the subject. Various initiatives were presented. As informants states and highlighted how teachers make PE lesson engaging and interesting to students and innovation or novelty plays a big role in dealing the diverse challenges in teaching PE.

Creativity and innovation in diversity of teaching PE

We live in a world where increasingly complex problems require creative solutions. According to the informants 6; they have dealt the challenges and struggles in such away that use of vacant parking area turn into playing area, modified games or traditional games instead of competitive games since lack of equipment, use of empty plastic bottles instead of weights and light plastic materials as substitute for exercises equipment. Most of respondents agreed that being creative and innovative is essential in order to make an engaging activity in PE especially the lack of support. Informant 7 states, *"I believe that whenever there are problems in the implementation, creativity of the teacher is needed. The teachers should have a skills in dealing the challenging competencies of curriculum particularly on deciding what innovative* *teaching materials would fit an activity that learners would appreciate and become an active individual towards health and fitness.* Moreover, the data indicated that demonstrated considerable flexibility and model creativity by being innovative in response to children's interests and needs. Thomson (2007) states that in order for the teacher to stimulate the students to get more interested in what they are teaching, it requires resourcefulness.

To suit the interest of students and accommodate in the limited space and resources in the class, innovation in the profession takes its role. Teachers learn how to critically respond in their respective local challenges and develop design-centric approaches that lead to solutions. PE teachers learn to adapt the perennial problem and lack of support in the scenario of teaching the subject, however, this was not an hindrance in implementing the program because any available resources can possible use as the materials, space and equipment teaching the program would continue. As informant 14:states that, *I try to modify some of my lessons in such a way that it can accommodate the available materials in school. For example, instead of using baseball in the play, I used plastered crumbled paper as ball of our games.* As added by informant 15 states that, *whenever I feel that the lesson is not so engaging to my students, I try to modify it so that my students can have fun while learning.* Informant 12: *We only have limited space in the school for physical activities. In fact we do not have gymnasiums and courts for sporting activities. What I do is that I utilized the extra small spaces in the school and have my activities there. Usually in the garden or vacant lots.* Hence, it can be deduced that respondents believed that having the value of being innovative and creative teachers it gives them sense of fulfillment and having the lack of support becomes the opportunities of every individual in making meaning out of what they're doing.

CONCLUSION

The multi-faceted roles of Physical Education as disciplines have become an important component in achieving quality education and attaining optimum holistic development of a person. Study shows that Physical Education, health and sports could not fully meet the societies demand on promoting fitness particular in eradicating sedentary lifestyles even thought pedagogies and practices in teaching PE, health and sports are adept and proficient and still could not meet the demand of the challenges of the fast-changing globalized world due to the curriculum that were not given more value by the administration up to the policy makers. Lastly, teachers must be given opportunities not only in advancing the skills in teaching but also in research and publication, pedagogies should not only be comprehensive, integrative, sustainable and activity-based, but must continuously evaluated and research based.

RECOMMENDATIONS

This study recommends that intervention measures may be enacted to better assist the physical education teachers in achieving more positive and successful implementation of the goals, objectives and roles of Physical Education, Health and Sports in the academe.

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HEALTH RELATED FITNESS AS PREDICTOR OF SELECTED COLLEGE STUDENTS' ACADEMIC ACHIEVEMENTS

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ABSTRACT

Physical fitness and academic performance of two hundred twenty-two (222) senior high school students was examined to determine which of the health-related components of physical fitness can predict academic performance. Descriptive-analytical-correlation method was employed. Academic performance was assessed using through student's General Weighted Average (GWA) grade. Study reveals that cardio-respiratory endurance was positively and significantly correlated with students' General Weighted Average. It also reveals that cardio-respiratory endurance or aerobic capacity, muscular strength and endurance were good predictors of students' academic performance. Study recommends that students should be encouraged to participate in physical activities to receive cardio-respiratory benefits and physical fitness in the curriculum should be given priority by institution since the individual develops his mental capacities through engagement in physical activities.

Key Words: Physical fitness, physical fitness test, academic performance, general weighted average, aerobic capacity,

INTRODUCTION

The essential aim of physical education is fitness conferring to Andin (1985), it is this basic aim that sets the direction for what is to be accomplished and helps to determine whether the effort is approaching the desired goal. The goal of physical education is to make every individual physically knowledgeable towards an active and healthy community.

One of the most essential facets of fitness is physical robustness, Poquiz (2008). Therefore, defining physical fitness would mean to different people. According to Catapang (2000), being physically fit means being muscular and being able to lift heavy weights. Others believe that to be fit is to be perceived as lean or thin body. On the other hand, the World Health Organization (2010) define being physically fit as being able to endure the physical demands of daily living.

The President's Council on Physical Fitness and Sports' Guidelines for Personal Exercise Programs (2009) explains that physical fitness is most easily understood by examining its components or "parts." Physical fitness can be classified into health-related and skill related fitness. The five health-related physical fitness components are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.

On the other hand, academic achievement is the over-all rating of an individual after a thorough evaluation of his / her performance. After completing an academic year, students are rated according to what they have achieved or performed·

Even though the benefits of physical fitness are acknowledged and there is a growing body of research on the positive effects of physical activity on physical and psychological health, the relationship between academic performance and physical activity has not been widely investigated.

Fitness involves more than just being "physically fit." Through participation in physical education activities, the individual develops his mental capacities (Andin: 1985). This concept is supported by Robert Dustman, director of Neuropsychology Veterans Affairs Medical Center in Salt Lake City, as his research found a direct link between fitness and intelligence. The link between aerobic exercise and intelligence he says is "oxygen" which the brain depends on to function properly. Findings revealed that an improved function of the heart and lungs would get smarter.

Additionally, evidences suggest that physical education has a direct positive effect on important educational domains such as reading and mathematics (Keays: 1993). Moderate to vigorous physical activity favorably enhance skill performance in classroom functions such as arithmetic, reading, memorization, and categorization. Woodward Jr. [2009] validated the same findings as he stresses the relationship between physical fitness and academic performance centers on the physiological changes during exercise, and how those changes aid memory and learning.

The United States Surgeon General [1996] also explains that all of the body's systems change dramatically when a person transitions from resting state to exercise. Increased blood flow, because of cardio-respiratory response to exercise, includes an increase of blood flow to the skin and active skeletal muscles. Woodward Jr. [2009] states that oxygen extraction and pulmonary ventilation occurs instantaneously. Short term and long-term effects of improved cardio-respiratory fitness may include a reduction of depression and anxiety, and an increase in self-esteem. Sigman [2008]. These effects may lead to a positive relationship with academic performance.

Numerous studies relating physical activity and physical fitness to academic achievement in response to the need of increasing the number of hours that physical education must be taught.

All over the country's most of academic institution give less priorities on physical education subject that leads to shortening of time. In line with these, the study would like to find out the connection between health-related physical fitness towards academic achievement among college students.

The Problem

This study determine the relationship between academic performance and health-related physical fitness. Specifically, it answers to the following questions:

What are the physical fitness level of senior high school students in terms of the following components:

a. cardio-respiratory endurance;
b. muscular strength;
c. muscular endurance;
d. flexibility; and
e. body composition?

Is there a significant relationship between the students' physical fitness levels and general weighted average [GWA]?

What health related fitness components could predict academic performance?

METHOD

Design employed in the study was the descriptive- analytical. Fitness levels were determined by assessing participants on the battery of physical fitness tests, which measures body composition, cardio-respiratory endurance or aerobic capacity, muscular strength and muscular endurance, muscular power and flexibility. Academic performance was evaluated using the student's General Weighted Average (GWA) grade for the first semester.

Various fitness tests such as the Back-Saver Sit and Reach Test, body mass index (BMI), the Curl-Up Test, Push-Up Test, Step-test and Vertical Jump Test were used to evaluate students' level of personal fitness.

This study selected the six fitness tests that are recommended under Department of Education's Order No. 31 s. 2012 on the Revised Philippine Physical Fitness Test (RPPFT) and a total of 222 selected first year college students. The study was conducted following the procedures on physical fitness test [pre-test and post-test]. The results of the tests were recorded and classified based on the fitness scale. However, only the results of the posttests were used to compare with the students' GWA. After, a thorough gathering, review, and recording students' general weighted average. Securing institutional consent and ethical review was also followed particularly on the confidentiality of person's or student's data.

The pre-test and post-test results, and the grade point average was tabulated and calculated with simple percentage and weighted mean. The relationship between students' fitness test levels and general weighted average were computed and interpreted using the Pearson-correlation coefficient.

Multiple regressions were also used to determine if there were physical fitness components that predict academic performance. *Anova* was utilized for testing the linear relationship between students' GWA and the set of independent variables.

The hypothesis on "is there a relationship between students' fitness levels and GWA" was tested to find out if there were significant relationships between students' general weighted average [GWA] and the six [6] fitness levels:

RESULT AND DISCUSSION

The Guidelines for Personal Exercise Programs explains that physical fitness is most easily understood by examining its components or "parts." Physical fitness can be classified into health-related and skill related fitness. The five health-related physical fitness components are cardiorespiratory endurance, muscular strength, muscular endurance, and flexibility and body composition.

The physical fitness level of senior high school students in terms of;

Table 1: Muscular Strength and Endurance (Push-up)

Descriptors	Students	Percentage	Rank
Poor	11	5.0%	4
Average	43	19.4%	3
Very Good	81	36.5%	2
Excellent	87	39.2%	1
Total	**222**	**100.0%**	
MEAN	22.6	*Very Good*	
SD	6.6		

Push-ups measures the power and endurance of the arms and upper body muscles particularly the shoulders whether these muscles are strong enough to maintain the upper body functions.

To measure the muscular strength and endurance level of the students, the number of push-ups were measured. The results in Table 1 show that majority of the students (87 or 39.2%) have “excellent” performance in push-ups. Only few (11 or 5.0%) of the students performed poorly in the tests.

Overall, the mean of 22.6 with standard deviation of 6.6 indicate that students were able to execute a “very good” performance in the push up test.

The results imply that students have a very good level of fitness when it comes to power and endurance of the arms and the upper body.

The physical fitness level of students in terms of;

Table 1.a Muscular Strength and Endurance (Curl-Up)

Descriptors	**Students**	**Percentage**	**Rank**
Poor	23	10.4%	3
Average	22	9.9%	4
Very Good	58	26.1%	2
Excellent	119	53.6%	1
Total	**222**	**100.0%**	
MEAN	27.1	*Excellent*	
SD	8.6		

The curl-ups measures the strength and endurance of the abdominal muscles, whether these muscles are strong enough to maintain the alignment of the hips for good posture. The number of curl-ups that students can perform was determined to measure their muscular strength and endurance levels.

The results in Tables 1.a shows that majority (119 or 53.6) of the students have an “excellent” performance in Curl-ups. There were a number of students (23 or 10.4%). who performed “poorly” in the same test.

The mean score of 27.1 (SD = 8.6) gave the students an overall rating of “excellent”. The results imply that students have excellent condition in terms of the muscle strength and endurance in the lower body. The lower body muscles are also use to maintain the alignment of the hips for good posture.

The physical fitness level of students in terms of;

Table 2: Flexibility

Descriptors		
Poor	2	0.9%
Average	18	8.1%
Very Good	53	23.9%
Excellent	149	67.1%
Total	**222**	**100.0%**
Mean	**37.4**	*Excellent*
S D	**9.9**	

Flexibility is the ability to move the joints and use muscles through their full range of motion. The sit-and-reach test was used to measure the flexibility of the students’ flexibility of the lower back and backs of the upper legs.

The results in Table 2 show that majority (149 or 67.1%) of the students excellently demonstrate performance in the sit-and-reach test. Only few (2 or 0.9) of the students has “poor” performance in the test.

Overall, the mean score in the sit-and-reach is 37.4 inches (SD = 9.9) described as “excellent”. The results imply that students’ flexibility level is “excellent”. Meaning, they were able to move their muscles and joints effectively through a complete range of motion.

The physical fitness level of students in terms of;

Table 3: Muscular Power

Descriptors	**Number of Students**	**Percentage**	**Rank**
Poor	3	1.4%	4
Average	17	7.7%	3
Very Good	50	22.5%	2
Excellent	152	68.5%	1
Total	**222**	**100.0%**	
Mean	**81.51 in.**	*Excellent*	
Standard Deviation	**3.90**		

Muscular power is the ability to exert a maximal force in as short a time as possible. Students muscular power were measured in the Standing Long Jump test. This is a good test to measure the explosive power of the leg muscles.

Table 3 shows the muscular power level of the students. The results show that the majority of the students (152 or 68.5%) have an “excellent” performance in standing long jump. Only a small number (3 or 1.4%) have “poor” performance in the test. Overall, the mean performance of the students in standing long jump is 81.51 inches (SD = 3.90) which is equivalent to “excellent’ performance.

This implies that students were able to exert a maximal force in as short a time as possible in jumping.

The physical fitness level of students in terms of;

Table 4: Cardio-Respiratory Endurance

Step-Test Rating	**Number of Students**	**Percentage**	**Rank**
Very Poor	2	0.9%	7
Poor	15	6.8%	5
Average	36	16.2%	4
Good	75	33.8%	1
Very Good	49	22.1%	2
Excellent	37	16.7%	3
Superior	8	3.6%	6
Total	222	**100.0%**	
Mean	**45.7**	**Good**	
SD	**5.13**		

The researchers used the step-test to measure the cardio-respiratory endurance of the students. The step-test is a good measure of fitness, and student's ability to recover after a strenuous exercise. It is also a good cardiac stress test for detecting and diagnosing cardiovascular disease.

Table 4 shows the cardio-respiratory endurance level of the students. Out of 222 respondents, majority (75 or 33.8%) exhibits a "good" performance in the test. 49 or 22.1% were very good and 36 or 16.2% have average performance, 37 or 16.7% were excellent performers and 8 or 3.6% have superior performance. Only 25 6.8% and 2 0.9% performed "poorly" and "very poorly" on the test respectively.

The mean score of 45.7 (SD = 5.13) gives the students an overall rating of "good". The results show that students" fitness level in the cardio-respiratory endurance is good. Meaning, students with good cardio-respiratory endurance has the ability to recover fast after a very strenuous physical activity. Having good cardio-respiratory endurance also imply that the respondents have a low tendency for cardiovascular disease.

Lastly the BMI results as shown on the table.

Table 5: Body Composition

Category	Frequency	Percentage
Underweight	91	40.99
Normal	123	55.41
Overweight	5	2.25
Obese	3	1.35
Total	222	100

It can be gleaned from table 5 that 123 college students equivalent to 55.41% were classified to have normal weight as a result of their measurement in the body mass index. 91 or 40.99% were assessed insufficient in weight or underweight, while five (5) and three (3) were classified as overweight and obese, equivalent to 2.25% and 1.35 6% respectively.

The next table shows the students distribution in terms of GWA.

Table 6: Students' General Weighted Average

Grade	Students	Percentage	Descriptor	Rank
below 75	7	3.2%	*DNME*	5
75 – 79	52	23.4%	*FS*	3
80 – 84	58	26.1%	*S*	2
85 – 89	67	30.2%	*VS*	1
90 – 100	38	17.1%	*O*	4
Total	222	100.0%		
Mean	83.77		*Satisfactory*	
SD	5.69			

Legend: DNME-Did not meet expectations; FS-Fairly Satisfactory; S-Satisfactory; VS-Very Satisfactory; O-Outstanding

Majority of students (67 or 30.2%) have "very satisfactory" rating. 58 or 26.1% have a GWA between 80-84 describe as satisfactory, while 52 (23.4%) have a grade of 75-79 which is fairly satisfactory. Only 38 or 17.1% got an outstanding grade of 90-100 while there were only few students (7 or 3.2%) who "did not meet expectations".

Overall, the academic performance of the students has a mean of 83.77 (SD = 5.69) described as "Satisfactory". It is very interesting to know whether the academic performance of these students is related to their health-related fitness as shown in the previous tables.

Table 7: Correlation Between Health-Related Fitness and General Weighted Average

		Cardio-Respiratory Endurance	Muscular Strength and Endurance	Flexibility	Muscular Power	Body Composition
General Weighted Average	**Pearson Correlation**	.117	.148*	.025	-.116	.003
	Sig. (2-tailed)	.083	.027	.713	.05	.962
	N	222	222	222	222	222

Table 7 summarizes the correlation analyses conducted to determine the relationship of the six (6) health-related fitness variables and the General Weighted Average.

As can be seen, Cardio-Respiratory Endurance (r=.177), Muscular Strength and Endurance (r=.148), Flexibility (r = .025), and body composition (r=.003) are all positively correlated with students' general weighted average. However, only the cardio-respiratory endurance (r=.177, p < .05) is significantly correlated with the general weighted average.

Muscular Power (r=-.116, p > .085) is negatively correlated but is not significantly related to the general weighted average.

The results indicate that students with high scores in the step-test which measures cardio-respiratory endurance or aerobic capacity have higher general weighted average compared to those other health-related variables. This finding validated researches that has provided evidence that cognitive functions are affected by physical activity level. Van Dusen et. al. (2011) and Chen et. al. (2013) reported that cardio-respiratory endurance was significantly correlated with the academic performance. Coe et. al. (2006) argued that students with vigorous activity was significantly correlated with higher grades. Tomporowski, Davis, Miller & Naglieri (2008) on the other hand claimed that exercise may prove to be important method of enhancing students' mental functioning and central to cognitive development.

In a study that observed the effect of physical activity on math scores, O'Dea and Mugridge (2012) noted that the highest numeracy score was associated with higher physical activity. These studies all support the notion that physical activity directly affects overall academic achievement.

The results or findings lead the researchers to conclude that there are significant relationships between students' GWA and fitness components.

Table 7: Correlations and Results of Regression Analyses

Variables	Correlations with GWA	Multiple Regression Weights		Sig.
		B	Beta	
Cardio-Respiratory Endurance	.117	.188*	.284	.003
Muscular Strength and Endurance	.148*	.230*	.268	.002
Flexibility	.025	.019	.034	.689
Muscular Power	-.116	-.245*	-.493	.000
Body Composition	.003	-.137	-.032	.669

*p < .05 – there is significant correlation

Multiple regression analyses were used to examine the relationship between general weighted average and various potential predictors in health-related fitness. The multiple regression model with all six (6) predictors produced R2 = .364, F (6, 215) = 5.480, p < .05 which imply that there is a significant relationship between the health-related fitness and academic performance. Also, 36% of the variation in the general weighted average can be attributed to the regression model using the six (6) health-related fitness variables.

As a result, Cardio-Respiratory Endurance (B=.188, $p < .05$), and Muscular Strength and Endurance (B=.230, $p < .002$) were found to have significant positive regression weights, indicating that students with higher scores in the health-related fitness scales are expected to have higher general weighted average, thereby arriving at a conclusion that these two (2) variables can predict academic performance. This development can be associated to the study of Robert Dustman as his research found a direct link between fitness and intelligence. The link between aerobic exercise and intelligence he says is "oxygen" which the brain depends on to function properly. Findings revealed that an improved function of the heart and lungs would get smarter.

Meanwhile, after accounting for cardio-respiratory endurance and muscular strength and endurance, it was found out that muscular power has significant negative weights (B=-.245, $p < .05$), meaning, those students with higher fitness level in muscular power were expected to have lower general weighted average. Nevertheless, it can also be concluded that this variable can also predict academic performance.On the other hand, flexibility and body composition are health-related fitness that did not contribute to the multiple regression model. Thus, these variables are not good predictors of general weighted average.

Therefore, it can be concluded that cardio-respiratory endurance, muscular strength and endurance, and muscular power can predict students' academic performance. Therefore, the derived regression equation can be used to predict GWA.

CONCLUSIONS AND RECOMMENDATIONS

There are positive and significant relationships that were observed between students GWA and cardiorespiratory endurance. To receive cardio-respiratory benefits, students should be encouraged to participate in physical activities at an intense level and more physical activity options specially on aerobic exercise to enhance the brain to function properly should be made available to students in their physical education subjects. An improved function of the heart and lungs will get one smarter according to researches.

The 3 fitness components namely: cardio-respiratory endurance as measured in the step test; muscular strength and endurance as assessed in the push and curl up test; and muscular power as evaluated in the standing long jump were found to have significant regression weights, therefore, these three (3) fitness components can be used to predict GWA of college students.

Based on the findings, the following were recommended: Physical education goes hand in hand with fitness that sets the direction for what is to be accomplished and helps to determine whether the effort is approaching the desired goal. Therefore, physical fitness should be given priority by the institution. The PE curriculum should be taken to ensure that every student from elementary up to tertiary receives at least forty to sixty minutes of physical activity or three times a week. Physical educators should be given variety of professional engagement and opportunities that would enhance delivery of teaching including research and publication. Lastly, physical fitness assessments should be administered regularly so that every individual would be aware and realized the importance of physical fitness *vis -a -vis* to physical education as a subject.

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THE EFFECTS OF PHYSICAL ACTIVITIES ON PSYCHOOGICAL WELL-BEING AMONG MALE ECONDARY SCHOOL STUDENTS IN KHANEWAL

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ABSTRACT

The purpose of this study is to investigate the interest of students in physical activities at male secondary school level in Khanewal. The researcher identify the effects of physical activity on psychological well-being of secondary school students, on the other hand they were enough confident in their own opinions. Quantitative survey research design used in this study, Data collected from 9th and 10th class students. Sample size for this study used 870 male secondary school students of several schools in Khanewal. The researcher conclude that vigorous activities do not have any strong or even significant correlation with more of the psychological factors, weather it is Self-Acceptance, Autonomy, Personal growth, Positive Relationship with others, Environmental Mastery or Purpose in Life is concerned. For the moderate activities, correlation coefficients of all psychological factors understudy give significance. But it has been observed that a strong positive impact can be seen with environmental Mastery; more over Purpose of life seem to have very strong relation with moderate activities as strength of the correlation coefficient was too high. While moderate activities showed a small but significant correlation with respect to Self-Acceptance, Autonomy and Personal Growth, on the other hand, vigorous activities give fully insignificant correlation coefficients with these psychological factors. However, Conclusion can be made that; walk has more impact of the psychological factors understudied. But environmental Mastery and Purpose of life seem to have more effect from moderate activities of daily life.

Key word: Physical activities; psychological well-being,Exercise, secondary school students, study stress, life satisfaction, mood.

INTRODUCTION

Activities regarding the physical appearance of the human beings are given as "movement of any physical body that may produce the muscles skeletal, are the result of energy that is consume (35 who2004). These activities define that the energy of a body is consumed by different movements, such as ascending the stairs, cultivation or gardening and through walking or dancing, such activities utilize energy. The energetic concentration is moderated by the physical commotion to maintain health. Health can be improved by physical activities or further in the upcoming time. The majority of the people are unable to perform activities or exercise for physical appearance. All categories of people for their sizes, benefits, and shapes can be beneficial for activities.

It is psychological effect the fulfillment, quality and happiness of life is essential. The complete absence of sickness in either type, it is better a good health and mental conditions. The happiness of human beings is the psychological effect regarding the appearance of body, ideal working conditions of an individual in their social existence (7 Deci& Ryan, 2008). The idea of the lives of psychological well-beings is served in a good manner and as well as effecting working(13 Huppert, F. A 2009)

The physical activity and psychological well-being are identified as significant factors for the students of secondary school and there is an interested connection between them. The superiority of life can be changed and improve by these experiences. These exercises are also suitable to change the student's mental level and growth on the secondary level. The purpose of this research is to observe the belongings of these activities on both issues that are discussing in this research and numerous exercises are involved.

The person who are participates in different type of activities can maintain his good health, emotions, and better mood. Psychological well-being can be encouraged by the good exercise and the quality of living style.

Now it is time to move on the responsiveness of empathetic link that are associated and the contributing facilities for these activities to intensification of the psychologically well-being. The satisfaction level of life and nature of good mood can be generated by these effective exercises as well psychological well-being. Large number of people advantages of better health and mental approach by the regular use of exercises. "There is a sound mind in the sound body" (1 John, L 1685) .It is common practice in society which found a resilient relationship and effects between the satisfactions physically and psychologically wellbeing.

The minimum level of activity either a physical is improved with the Psychological well-being, (21 Lloyd, k. & little, d.e. 2010). The psychological well-being is a ground reality to reshape and determining or assessing the various factors of psychological well-being. For this purpose, six factors of psychological well-being as self-acceptance, positive relations with others, autonomy, environmental mastery, purpose of life and personal growth, self acceptance(32 Ryff, C.D1989) most noticeable for positive working psychologically

A better feeling of an individual about himself and agree to take the strength and faintness. One can easily distinguish between evil and virtuous contributing in these activities. In participating such activities, the feebleness can easily be removed and one can utilize himself properly in a good way in his life aspects.

One of the most positive impacts is that someone's self-confidence, capacities and abilities were enhanced. New experiences are performed and learn something new on daily basis. In a different circumstance, a man can be exposed himself for development and evolution. This process may be fruitful and better appreciative in these activities. To get relaxed and comforts from entire day work, it is a good source to release tensions and depression.

The factors of psychological well-being is (self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth, self acceptance (30 Ryff &keyes1995)that are discussed in this research related to contentment's, pleasures, and the satisfaction of life. Healthy activities on the daily basis for the students of secondary school can evaluate the well-beings. The psychological factors can be improved by these practices. Different types of stress and illness or depression being experienced by the teenagers in the school life but it is good option to release all type of stress through these aspects.

Overall, stress and depression can be controlled by these exercises and activities during the hard work of school students **(**16 Haugland, S., Wold, B., & Torsheim, T. (2003). 10 Durie, M. (2004)**.**When school-age students participate in physical activity, they have the opportunity to improve their personal well-being (17 Keating, Guan, Pinero, & Bridges, 2010).These activities are the good source to minimize the anxiety to overcome the downheartedness. When students are in age group of twelve and eighteen, in this age group these activities have the vital role in their lives to grow up and then meaningful, desired results can be obtained. In this age group many more activities can be habitual but these types of activities away from bad habits (25bNorris, R., Carroll, D., &Cochrane, 1992).

Now a day's lake of tolerance, life satisfaction, and mostly people suffering with anxiety, depression and some other mentally diseases; researcher found in the society. And other about a decade before the technology, exercises were highly regarded physical activities in day to day life. People have different theme to be the part in physical activity. After a swear amount work they move to grounds for different physical activity to fresh mood and with the motive of joy satisfaction with collegues and fellows. People participate in physical activities to maintain physical fitness level, enjoyment and social interaction.

Problem of statement

About a decade before the technology, exercises were highly regarded physical activities in day to day life.The people who are depressed or stressed due to some problems then these types of activity play pivotal role to reduce these problems of depression. The disordered people can also be recovered by these activities (22 Lawlor, D. A., &Hopker, S. W. (2001). Mental abilities can be maximized by performing the various type of exercises by the majority of the people, these efforts also improve the sections of mood by the self-conditioning to maintain their fitness, as well as the satisfaction is required. More benefits can obtain by the mental abilities by improving these exercises. The researcher highly wants to people who are suffering with depression and other some mental problems then these types of activities vital role to reduce the problem of students and it will be helpful for the other people of the society, implementation this research for the battement of society at national and international level.

1. Literature review

The well-known definition about health is "A complete physical fitness, mental adjustment and social well-being which is possible in the absent of any disease exhibited by (36 WHO organization2004). The merits and demerits were also defined (8 Downie,A.B. Mullingan,J.1996).The first section of definition represents health as a positive concept like well-being. While in second section of definition in the absence of disease or infirmary health consider as a negative concept. According to these dimensions into consideration, the true health is about to prevent from in firmer or disease and improve the health. The previous work shows a lot of evidence related to positive aspects of physical activity on wellbeing but the concept of physical fitness connection with high volume of physical activities is remain unclear. The main aim of this research work to evaluate the relationship among mentally adjustment and physical fitness.

2.1 Physical Activity:

Physical activity is the name of a behavior which is composite. In physical activity many occupational grammatical activity included like care, giving, domestic cleaning, walking or cycling to work and leisure-time activities. In physical activity exercise count as subclass of recreational activities which are performed to improve the fitness level of individual ones because physical activities are planned by their instructors, structured according to physique level and repetitive bodily movements that can easily performed(3Biddle, S. J., Gorely, T., &Stensel, D. J. (2004).A large number of proof exhibited that somatic activity has many bodily and emotional benefits. Therefore a healthy lifestyle based on physical activity (18 Keim, 2004). One of the important aspects of health related benefits is psychological well-being.

2.2 Psychological well-being:

"Lives with better health are only possible with psychological well-being. Better feeling and effectively working is the main aspects of psychological well-being" (13-14 Huppert, 2009). According to some researcher with low intensity of exercise psychological well-being may be increased. (21 Lloyd, K., & Little, D. E. (2010).Psychological well-being is grounded base tool that is used to evaluate various features (13-14 Huppert, 2009).

2.3 Relationship between physical activities and psychology well-being:

The researcher decided to conduct the study at secondary level to know the effects of physical activity on psychological well-being among male secondary school students in Khanewal. The researcher identifies the positive connection among self-esteem and exercise, psychological well-being, self-efficacy and cognitive functioning, while negative connection that can see among exercise and psychological obstacles like anxiety, stress, and depression (24 McAuley, & Rudolph, D1995). To enhance the levels of physical activity are proven to have a positive impact on physical health and mental well-being (4 Biddle, S. J., &Asare, M. (2011)

The psychological wellbeing has positivity of affect with high satisfaction in life. Commonly, people give highly value to their wellbeing and want a happy and satisfied life (9 Diener, E. 2000).To enhance the psychological wellbeing physical activity may be a practical tool. Generally, physical activity has been found higher level of life satisfaction that related to more positive affect (26Netz, Y., Wu, M. J., Becker, B. J., &Tenenbaum, G. (2005). Age weakened the effect of physical activity on well-being. The older age enhancing our level of maturity of wellbeing with whole of life (26 Netz, Y., Wu, M. J., Becker, B. J., &Tenenbaum, G. (2005)

It seems strange to see the comparison of other stages with psychological wellbeing in childhood of life. Some research work related psychological wellbeing tends to start in early adulthood. Although the direct comparisons had not seen with other life stages (19 Klassen, R. M., & Chiu, M. M 2010).While some studies suggest children are mostly happy and satisfied with their lives (Wallace, 2010). Some evidence suggests wellbeing may starting fall down near about 10 years old (13 Greene, A. L., & Adams-Price, C. 1990).The wellness circle describes the 12 categories like worthiness, self-control, logics, self-awareness and coping, solutions, imagination, humor, food, self-care, stress control, sexuality and cultural. The psychological wellbeing research related to hedonic tradition defines psychological wellbeing as happiness, as a Positive and negative effect, and life satisfaction (20 kahneman, 1999). The eudemonic tradition of psychological wellbeing research highlights positive psychological aspects and development of individuals. Nowadays most researchers believe that mental wellbeing is a multi-dimensional aspect of human life (11 Dodge, R., Daly, A. P., Huyton, J., & Sanders, L. D. 2012).

2.4 The effects of physical activities on human during life span

The physical activity collapse because of the time distribution from the teenagers, the main cause is interactive attitude, and the encouragement for this process on the different stages of life. The access of workload and no spare time for healthy activity and no attraction for the health maintenance may cause of the ill-conditioning. There will be no time to allocate for these exercises or activities, these views are offered in (23 Larson, R. W., Verma, 1999). The less interest in the play grounds and less appearance of people in the health maintenance activity publicized the lack of efficiency in their other fields of life as they perform. The teenagers should be the part of these actions to perform well and be more active. Generally, the psychologically well-being can be shrink by the categorizing the adolescence as compared to early age. The satisfaction level is lessening in the age between 11 and 16 in the life, and the teenagers are satisfied at all the stages of their life (12 HolleranSteiker, L. K., Sagun, D., Hopson, L. M., &Goldback, 2007). There is only 11 percent of the teenagers in the society are in unsatisfactory conditions in their lives.

These crucial conditions make it difficult and explain that to see the affiliation between them. In our research it is represented that the teenagers are not so active in their activities because of lessen interest in fields or play areas and all of these are lessen at their satisfaction in their lives at any stage. All these types of people face many problem regarding health and physical. The long lasting effects can be achieved by these practices.

RESEARCH METHODOLOGY

A quantitative survey research design will be used in this study. This study was conducted at secondary schools in district Khanewal. Data collected from 9th and 10th class students. Sample size for study 870 male secondary school students of several schools in Khanewal. Two questionnaires i.e. International Physical Activity Questionnaire (3 Craig. C. L., Marshall, A.

L., Sjöström, M., Bauman, A. E., Booth, M. L., Ainsworth, B. E.,&Oja, P, 2003). And PWB includes six subscales of psychological well-being of self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth, self acceptance (“The Scales of Psychological Well-being was developed by (29 Ryff,C.D.1989) used to collect data from secondary school students in district Khanewal.

Researcher to meet the male secondary school students of Khanewal in classes and group. First introduce him after getting consent and then give awareness of his research topic and objectives. Help them to understand the question. The study objectives, procedures, and rights of participants were well explained. For students who participated in the quantitative survey, their consent was considered when they returned their completed questionnaires. All male 76698 students of 109 Secondary School situated in Khanewal were consider as sample unites who have been getting education in 9th and 10th classes besides this was school situated in urban area and it was in rural. For the purpose of sampling according to (6 Cochran,W.G. 2007) Simple random sampling were used to collect the data for observation from the 12thschools in this research.

As in earlier ages of growing, boys almost all reach in same manner in some extend, keeping this thing in eyes still a large same of size 870 has been selected to analysis the findings. All male candidates were chosen for the purpose, in this regard from a list of all the male schools of Khanewal had been observed from them randomly 12 schools from 4 Tehsil of Khanewal, and every Tehsil 3 schools were selected to be include in sample to analysis, from the selected school male of 9th and 10th classes were asked to give their opinion. More over equal number of observation has been made from rural and urban area schools.

To have an exact idea about if there was some kind of relationship exist between Correlation Between Physical Activities and different Psychological factors, (spss) statistical tool for correlation analysis had been use, for this Pearson Correlation were calculated and for their coefficients, significance had been tested.

(Spss) statistical tool should be used to summaries the information taken as data based open at which scale measurement have been made. In this survey, psychological responses regarding relation with surroundings, self-acceptance, autonomy, personal growth and purpose of life were collected by the school going boys. For this, Likert Scale had been used to know the point of view of the students as this came to be the most famous, literature propagate this. For more interesting aspects of the scale manuscript (28 Nemoto, T., &Beglar, 2014) could help. Now a day for conducting survey to check the responses using Likert Scale was not a thing to question referred (35 van Laerhoven, 2004).

RESULT SUMMARY

More of the students who participated in survey were from age group 14 to 17, as they become more than 94% of the total. Where Students’ fathers have qualification not more than Matric even largest percentage which was 30.7%have no education at all, where its valid percentage reached out to exactly 31 percent. Almost similar findings were observed regarding mothers’ education. Where percentage of illiterate dominate more than half of the observations which is in fact 51.6% where valid stand on 52.1 percentages.

Forms seven days of a week, more of the students have been observed who claims no to do any vigorous activities, precisely, 33% was from those. In fact, for vigorous activities, for 2 days, percentage reached out to 67, from which 16.2% form one day and 17.6% for two days in a whole week, vigorous activities for more than two days showed very little percentages.

Analysis performed previously, showed 63.7% of the students of 9th and 10th class who used to do some kind of moderate activities, where 36.3% still said that they did not perform any moderate physical activities, from 63.7%, 15% are those who do it only a day in a week, and 18% are those who do moderate activities only for one day.

As for as daily walk have been concerned 16.1% students said they use to do walk daily for 10 minutes or more. Where 28.8% of the students were those who did not used to walk, even for 10 minutes. More of the significant percentages were belongs to one day to 3 days of a week, regarding at least 10 minutes' walk.
When question was asked about doing vigorous activities in last week days, form total sample 32.8% (287) stated that they did not do any of vigorous activity in last 7 days. Where 16.2% (142) and 17.6% (154) said, they did it 1 or 2 days. Doing vigorous activities for three days 9.4% (82) of the candidates' clams that, 4.9% (43) are those who did it for four days in a week, similar percentage for 5 days, for six days there are students 6.3% (55) and for all the week 7.3% (64) from the total.

As for as moderate activities in last week days are concerned, form total sample, 36.1% (316) stated that they did not do any of moderate activity in last 7 days. Where 15% (131) are those who did it for 1 day in last 7 days, 18 %(157) said they did it for 2 days. Doing moderate activities for three days 9% (79) of the participants' clams that, 5.8% (51) are those who did it for four days in a week, for 5 days there are 3.1% (27) candidates, for six days there are students 4.8% (42) and for all the week 7.6% (67) from the total that did moderate activities. 0.7% (6) of the students did not respond to the question.

The distribution of students who walk for at least ten mints daily, form total of the observations, 28.5% (250) stated that they did not do any walk of the ten minutes. where 12.3% (108) are those who did it, 14.7%(129) said they did it for 2 days. Doing ten minutes' walk for three days 10% (88) of the candidates' clams that, 7.2% (63) are those who did it four days in a week, for 5 days there are 5.4% (47) candidates, for six days there are students 4.9% (43) and for all the week 16.1% (141) from the total who did 10 minutes' walk daily. 7 of the students did not respond.

DISCUSSION

The main aim is to see the effects of physical activity on psychological wellbeing among male secondary school students in Khanewal. How physical activities effects on psychological health of the secondary school students, those students participate in physical activity.

The previous research experience reveals in relation to the physical activity and psychological wellbeing. The participation of secondary school students in physical activity for the following type of reasons: happiness, joy, life satisfaction, good relation with other, excitement, and fitness. The main objective of the study is to find out the factors effecting on the psychological well-being at secondary school level. We found the study in different countries all over the world but not in district Khanewal. So this research may be important and also will explore the effects of physical activity participation. The present study focused physical activity and general well-being, some findings being convergent with past literature. Specifically the findings associated with physical activity, which does not moderate the relationship between perceived stress and psychological well-being. Although this does not solve current issues, it brings to light a gap in college-age research. This break allows an opportunity for more research surrounding the relationship of stressors and physical activity. Another helpful link could be to further understand physical activity and psychological well-being. However, this research provides knowledge based on positive affect and its relationship to physical activity. Previous research is outdated or focused on the use of coping mechanisms. To promote the physical activity participation which may help students to learn the basic needs and benefit, also helps to governing body and policy makers of sport federation to review their policies and engage the every member of the society in physical activity and exercise. This is quantitative type of research. Population of this study was the secondary school students. The individual, school and other background factors correlate with academic stress, mental health and well-being among secondary school students.

The current research examines the associations between physical activity, and psychological well-being. Earlier research studied relationships between stress and physical activity or stress and psychological well-being. This study, however, hopes to display the purpose of studying all three concepts. The hypothesis predicting physical activity would moderate the relationship between perceived study stress and psychological general well-being was not significant. Although perceived stress did significantly affect well-being. Based on the research questions, the multiple regression results display general positive affect and having interest and enjoyment in physical activity, both significantly relate to physical activity levels.

5.1Conclusions

As for as relationship was concerned, more of the students seem like they are more satisfied with their relationship towards other. But in return they seem little disappointed as more of the percentage said they not experienced so much trusting relationships.

Over all Students who participate in the survey seem satisfied with their personality but a little worried about their achievements, as they not feel that they made enough achievement until now but it was not a thing to worry as they pleased with things which have turned out so far.

Mixed behavior had been observed regarding autonomy. At one end, candidates of the survey said they tend to be influenced by people with strong opinions, on the other hand they said they were enough confident in their own opinions even if the opinion different from the others. Similarly, more of the student said they believe what they are thinking is important, not what other thought about the things.

Results propagate that more of the folks of the survey feel the life as a stage of doing experience things, they believe on learning, changing and growth. They give more importance to the challenging things. But some of them agreed with that they already gave up for improving things in life.

More of the students thought they are in charge of the situation around the clock, as they feel they are really good at managing the responsibilities, because of that some said they often get tired to do everyday life things.

More of the students of Khanewal district seem like have a clear-cut purpose of life, as they all have their own aims towards life. In the main time, they also know to enjoy life, as they live in the movements. More of them feel satisfied with the life asking as the feel they done more of the things of their life demands.

For the moderate activities, correlation coefficients of all psychological factors understudy give significance. But it has been observed that a strong positive impact can be seen with environmental Mastery; more over Purpose of life seem to have very strong relation with moderate activities as strength of the correlation coefficient was too high.

Moderate activities showed a small but significant correlation when observed with respect to Relation with others, Self-Acceptance, Autonomy and for Personal Growth, on the other hand, vigorous activities give fully insignificant correlation coefficients with these psychological factors. But when correlation has been observed with walk, more strong correlation has been observed. Strength of the coefficient improves. Conclusion can be made that; walk has more impact of the psychological factors understudied. But environmental Mastery and Purpose of life seem to have more effect from moderate activities of daily life.

RECOMMENDATION

Generally, it is difficult to make specific recommendations regarding physical Activity for psychological benefits among secondary school students. This study and overall trend suggests physical activity can be psychologically beneficial for high school students. Further, there is no evidence found during this research that activity causes psychological harm. This research recommends that participation in regular physical activity as specified in a good behavioral goal is for adolescents to develop the skills necessary to continue being active throughout their life style. The recommended 60 minutes or more of physical activity can be achieved in a cumulative manner in school during physical education, recess, intramural sports, and before and after school programs. Both physical education and recess afford opportunities to achieve the daily physical activity goal without any evidence of compromising academic performance. World is change time by time, and era of technology prevailed already, so activities of the young one has change dramatically, they must be taken as an account to do the analysis.

More than 50% of the world population’s are female; a parallel study must be conduct to account them. Literacy rate in Pakistan is so low and southern Punjab has more low literacy rate, study should also be conducted in some balanced area.

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GENDER DIFFERENCE IN ACADEMIC STRESS AMONG COLLEGE ATHLETES

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ABSTARCT

The purpose of the present investigation was to study the gender difference in academic stress among male and female college athletes. Academic stress is defined as a mental distress with respect to some anticipated frustration associated with academic failure or even unawareness to the possibility of such failure. There are four components of academic stress such as academic frustration, academic conflict, academic pressure and academic anxiety. In this study Rao's Academic stress scale (2008) was used for the assessment of academic frustration, academic pressure, academic conflict and academic anxiety of college athletes. The scale developed by Rao's consists of 40 items in the form of statements, which are to be responded by students. A total number of 70 college athletes (male =35 and female =35) were included in this study as sample. T-test was applied for find out the significance of mean difference among male and female college students in academic stress. The result revealed that male college athletes are significantly differing from female athletes in academic frustration. On the other hand male college athletes did not differ significantly from female college athletes on academic pressure, academic conflict and academic anxiety.

Key words: Academic stress, college athletes, academic frustration, academic pressure,

INTRODUCTION

Berstein (2008) defined academic stress as a mental distress with respect to some anticipated frustration associated with academic failure or even unawareness to the possibility of such failure. There are four components of academic stress such as academic frustration, academic conflict, academic pressure and academic anxiety. Students face academic demands for example examinations, answering questions in the class, showing progress in subjects, understanding the subject, competing with batch mates and fulfilling the academic expectations of teachers and parents. Student-athletes experience unique challenges compared to their non-athlete peers due to the additional pressures of sports participation and its impact on their academic and social engagement on campus (Beauchemin, 2014). Academically underprepared student-athletes likely face additional challenges as they struggle to keep up with course work, while meeting the demands of their sport participation. This can lead to additional stress, as a student struggles to remain eligible to compete, and thus retain their place on the team and athletic scholarships (Harris, Altekruse, & Engels, 2003). Due to their tedious schedules, many student-athletes reported having a difficult time incorporating studying into their training schedules (Comeaux and Harrison, 2011; Harris, Altekruse, and Engels, 2003; Cosh and Tully, 2014). Sport and education are seen as a trade-off, one being sacrificed in order to complete the other (Cosh and Tully, 2014).

Similarly, Umbach et al. (2006) used a national sample of athletes and non athletes in Divisions I, II, III, and the NAIA to compare their academic achievement. Umbach et al. concluded that even after "controlling for pre-college achievement (SAT), male athletes earn lower grades andthe gap between male athletes and non athletes is greatest at Division III and NAIA schools" (p. 17). For all divisions, the data showed that female athletes and female non athletes had similar grades.

While athletes may be talented and motivated, there also have been longstanding concerns that students who participate in intercollegiate athletics are held to a lower standard of academic achievement and are dependent on personal support from other people, such as coaches and administration within the athletic department, to function successfully in and out of the classroom (Chuan, Yusof, & Shah, 2012).

Male and female athletes tend to prioritize academics and athletics differently and consequently experience academic stress differently. Previous studies have shown that females are significantly more likely to report general college stress compared to their male counterparts (Bedewy and Gabriel, 2015; Lin and Huang, 2014), but are superior to their male counterparts in terms of higher scores on high school GPA, SAT scores, college GPA, and graduation rates (Simons et al., 1999; Reynolds, Fisher, and Cavil, 2012).

OBJECTIVES: The objective of the present study was to compare the academic stress of male and female college athletes.

HYPOTHESIS: It was hypothesized that there would not be significant difference in academic stress among male and female college athletes.

METHOD

The Sample

The sample of the present study comprised 70 college athletes (male =35) and (female =35) college athletes from Odisha who had participated at different National level competitions in athletics. The age of the subjects ranged between 18 to 20 years (mean age = 17 years).

INSTRUMENTS

The Rao's Academic stress scale (2008) was used for the assessment of academic frustration, academic pressure, academic conflict and academic anxiety of college athletes. The scale developed by Rao's consists of 40 items in the form of statements which are to be responded by students. In this scale there are 12 items to measure academic frustration, 8 items to measure academic conflict, 12 items to measure academic pressure and 8 items to measure academic anxiety. Respondents are required to give a response as NS (no stress), SS (slight stress), MS (moderate stress), HS (high stress) and ES (extreme stress). The value of the responses are 0, 1, 2, 3, and 4 for NS,SS,MS,HS and ES. Students academic stress score on each attribute is found by adding the scores in that attribute finally the total score is obtained by adding the scores of the attributes. Higher the score implies higher academic stress.

PROCEDURE

The instruments used in this study were compiled and printed in English. The questionnaire was administered to the respondents during their off practice hours. They filled up the questionnaire individually in the presence of the researcher.

ANALYSIS AND RESULTS

Table-1, Significance of Mean Difference between Male and Female College Athletes on Academic Stress

Group	**ACADEMIC FRUSTRATION**				**ACADEMIC PRESSURE**				**ACADEMIC CONFLICT**				**ACADEMIC ANXIETY**			
	Mean	N	SD	t	Mean	N	SD	t	Mean	N	SD	t	Mean	N	SD	**T**
Male	18.63	35	4.74	3.28* P<.05	15.77	35	3.35	1.05	13.77	35	2.61	.46	14.29	35	3.17	.33
Female	15.54	35	2.89		16.77	35	4.49		14.09	35	3.04		14.51	35	2.57	

(DF = 68)

Table 1 shows the significance of mean difference between male and female on academic stress (Academic frustration, Academic pressure, Academic conflict and Academic anxiety). On Academic frustration the result is found to be significant at .05 level with df 68. It means the male college athletes are differing from female college athletes on academic frustration. The mean of male and female college athletes is found to be (18.63 and 15.54) respectively. In case of academic pressure, the result is found to be insignificant. It means the male college athletes are not differing from female college athletes on academic pressure. In case of academic conflict, the result is found to be insignificant. So in academic pressure the male college athletes ate not differing from female college athletes. In case of academic anxiety, the result is found to be insignificant. It means the male college athletes are not differing from female college athletes on academic anxiety.

DISCUSSION AND CONCLUSION

The objective of the present study was to find out the academic stress of male and female college athletes. In case of academic frustration, the result is found to be significant at .05 level of significance with df 68. It means the male college athletes are differing from female college athletes in their academic frustration. The mean for male athletes on academic stress is found to be (18.63) and the mean for female college athletes on academic frustration is found to be (15.54). From the result, it is revealed that male college students are found to be more academically frustrated than female college athletes. The reason could be due to the fact that male college athletes are not regularly attending the classes and not serious about their academic success and satisfy themselves with success in sports. They feel academically frustrated when they are unable to meet the criteria in academic field. On the other hand interaction with the female athletes revealed that they give equal attention to both academic activities by attending their regular classes along with sport. In case of academic pressure, academic conflict and academic anxiety the result is found to be insignificant. It means both male and female college athletes are found to be similar with each in experiencing the academic pressure, academic conflict and academic anxiety.

From the above discussion, it is concluded that all the athletes have to maintain a balance in both academic and sport activities. Because some studies have suggested that student athletes' academic performance has been enhanced by participation in various sports programs, while other studies have revealed a decline in academic performance, resulting from the "multi-faceted roles" student athletes must fill at most Division III institutions (Barlow & Hickey, 2014). Most competitive athletes are assumed to be highly motivated individuals and one might conclude that some athletes can use that motivation to maintain a sense of balance among academics and athletics to attain success.

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CONNECTING STUDENTS SINCE PHYSICAL EDUCATION IN THE LOCKDOWN TIME. AN E-LEARNING SERVICE EXPERIENCE

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ABSTRACT

The arrival of COVID-19 to Spain produced a lot of changes. Government announced alert state, people had to stay at home, people didn't move outside, schools and universities were closed, etc. All changes did that teachers and students had to continue lessons but they couldn't go to school. For this reason, teachers and students had to adapt to a new situation and to use other methodologies and new technologies. Physical Education teachers also had to change our methodologies: using mobile phones, computers and other technologies for trying to students did physical exercise and to continue the physical education lessons. After of some weeks of lockdown, we did a research using a form. Data revelated that students were doing physical exercise at home but they had other problems: students felt alone; they needed to stay with other students; they needed to do physical exercise with friends; etc. For this reason, we decided to change the methodology and use E-learning service. So, we offered the possibility to students of Compulsory Secondary Education to participate in this experience. In this experience the High School Students would offer to Compulsory Secondary Education students some physical activities for connecting and doing them together. These activities could be dance and rhythm, traditional games, motor games, relaxation techniques as yoga, stretching, muscle-strengthening activity and so on. Students decided their preferences. After three weeks doing physical activities at home, students and families gave a positive evaluation of the experience. High school students taught some activities to Compulsory Secondary Education Students, worked together and using technologies. These activities improved the mental and physical health of students.

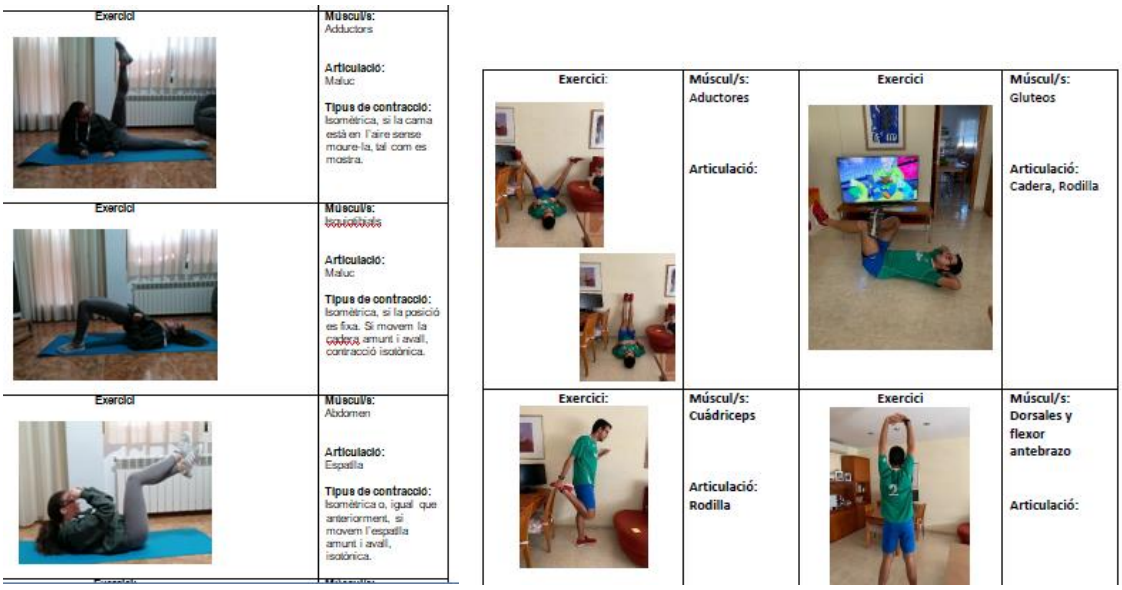
Keywords: Lockdown, COVID-19, E-learning service, physical education, high school

INTRODUCTION

In Spain, March 14th Spanish government announced alert state because COVID-19 was producing a lot of deaths. This alert state was an exceptional situation. This situation was similar in other European countries. With this, all people had to stay at home. Only were allowed fundamental activities as military service, health workers, pharmacies, supermarkets workers and so on. It meant that also teachers and students had to stay at home.

This measure surprised everybody because it was the first time that It was applied. This situation changed the lessons. In this time, the lessons wouldn't be face to face. Lessons had to be virtual. But they had some problems. Was the educative system ready to do it? Were students ready to work at home? Could the students work at home? Could the students continue Physical Education lessons?

At the first moment, from Maestrat High School Physical Education Department decided to send to students some activities for working alone at home. These activities were: to read some books and articles and physical activities about healthy habits, sports, traditional games, and so on; to use the virtual classroom for doing some test, exercise and comprehension activities about physical exercise and sports; to do some physical tasks using the new technologies; etc.



Exercici	Múscul/s:
	Múscul/s: Adductors **Articulació:** Maluc **Tipus de contracció:** Isomètrica, si la cama està en l'aire sense moure-la, tal com es mostra.
Exercici	**Múscul/s:** Isquiotibials **Articulació:** Maluc **Tipus de contracció:** Isomètrica, si la posició es fixa. Si movem la cadera amunt i avall, contracció isotònica.
Exercici	**Múscul/s:** Abdomen **Articulació:** Espatlla **Tipus de contracció:** Isomètrica o, igual que anteriorment, si movem l'espatlla amunt i avall, isotònica.

Exercici:	Múscul/s:	Exercici	Múscul/s:
	Aductores **Articulació:**		Gluteos **Articulació:** Cadera, Rodilla
Exercici:	**Múscul/s:** Cuádriceps **Articulació:** Rodilla	**Exercici**	**Múscul/s:** Dorsales y flexor antebrazo **Articulació:**

Figure 1. *Strength and stretching activities at home. Students had to do the physical exercise and to find the muscle, articulation and kind of muscular contraction*

After two weeks lockdown at home with these activities, we decided to research the student situation at home. We thought that was important to know the situation of students because initially the alert state was only for two weeks but, Spanish government decided to prolong it. In other European countries the situation was similar, as example Italy, and people stayed at home during more than one month.

For the research, we created a form (Google) with some questions about physical exercise to compare the situation before and during the lockdown. We asked questions as: How many weekly days do you practice Physical Exercise or Sport? How many weekly hours do you practice Physical Exercise or Sport? What kind of exercise did you do before the confine? Do you play a federate sport? Who are you doing physical exercise with? Which is the reason for you doing physical exercise? Have you increased the number of days of physical exercise? Have you increased the hours of physical exercise? And so on. Finally, we also asked with an open question which are the major changes in their life about the physical exercise.

Sample was 414 Maestrat High School students. This High School was located in Valencian Region. Form was sent using the corporative email. On April 13th, we obtained 244 complete forms.

Some conclusions of this research were:

- Number of students increased their voluntary physical exercise during the confine (16.1% not did exercise before and 11.15% not did exercise during the confine)

- Students did physical exercise to get fit (29%), body image (26%) and occupying free time (20%).
- Individual and sports team fell down with the lock down and students but it increased muscle-strengthening activities (from 27.2% to 45.6%)
- Physical Activity has been reduced. Each day people go to work or to buy, for example, walking, running, cycling, etc. With confine people had to reduce these physical activities.
- We think physical exercises at home won't improve the people physical condition. They only will be to maintain it.
- Before confine, they did prefer to do physical exercise alone (40,9%) and with friends (37,6%) but during lock down, students did physical exercise alone (59,2%) and with family (28,1%). With friends fell down 34.9%

With this research, we find out that some of scholar community problem during lock down by Covid-19. They were:

- Students felt alone and they need to stay with other people
- Students need to do physical exercise with friends
- Students need to use new technologies

Maybe, this situation could have to effect to the student mental health. So, from Physical Education we had to help to students and we decided to do a project "Stay at home but keep on moving with your partners"

Main goals of the project were:

- To improve the student health (physical and mental)
- To practice physical activities with partners
- To find out others possibilities about news technologies
- To motivate to students to do physical exercise
- To keep up the Physical Education subject

METHOD

Center for Teaching and Learning (2012) explains "Service-learning refers to learning that actively involves students in a wide range of experiences, which often benefit others and the community, while also advancing the goals of a given curriculum".

The qualities of service-learning are (Center for Teaching and Learning, 2012):

- Integrative. In this student works together with the community. For this reason, it uses traditional ideas of classroom learning, practicum training or off-campus volunteering.
- Reflective. This is one of the most important things. Reflection to help students to improve their skills and teach. For this they have to use and examine values, opinions, assumptions, etc. for learning.
- Contextualized. Learning of community is an important valour to the students. They help to community but they learn of it. There is a opportunity to connect their knowledge of a disciple and the community knowledge.

- Strength-Based. Detected the strong point of the community and working about them is a good opportunity to students.
- Reciprocal. This methodology offers all parties involved a lot of benefits. To students offer the knowledge develop in a real situation and context. Community also can profit the students knowledge.
- Lifelong. This methodology offers to opportunity to student to have a lifelong experience. Specially if the experience is positive. It rewards to students in a lot of life elements.

Krasny (2020) “social distancing is no reason to stop service learning” So, for doing the project “Stay at home but keep on moving with your partners” we used the E-learning service methodology.

According to Krasny (2020) “It does this by offering opportunities for any student and any nonprofit with an internet connection to form a partnership on short notice. E-service learning has also added new opportunities for busy students to help NGOs overseas, U.S. nonprofits and local governments in other states.”

Orti and Pairalo (2018) presents a learning service experience between students of Compulsory Secondary School and Primary School using traditional games. In this, after a research, Compulsory Secondary School students taught some traditional games around the town to the Primary School students. Goals of the project are: students knew other games for occupying the free time; students used these games for improving your physical condition; students get fit with these games; and so on.

Development

The project called “Stay at home but keep on moving with your partners” was developed during the lockdown time (April 6th to May 10th) because the students couldn’t go outside their home. Although, from April 27th could go outside to do physical exercise and individual sport.

We offered the possibility to participate in the project to every students of 1st High School course (16 years old), 3rd (14 years old) and 4th Compulsory Secondary School (15 years old). After the first information, about 83% of students would like to participate in the project.

So, we did 28 team. In each team we found one student of 1st High School and from 3 to 5 student of Compulsory Secondary School. Some students knew other students but a lot of students didn’t know others. Our high school receive students from 11 villages.

1st High School offered some activities to the others students (Compulsory Secondary High School) and they chose the most interesting activities. Some activities that students offered were: stretching, yoga, muscle-strengthening activities, dance and rhythm, endurance activities, traditional games… Each team had to choose the activities and a schedule for meeting minim two days to week. In the meeting, they had to change information and doing physical exercise together.

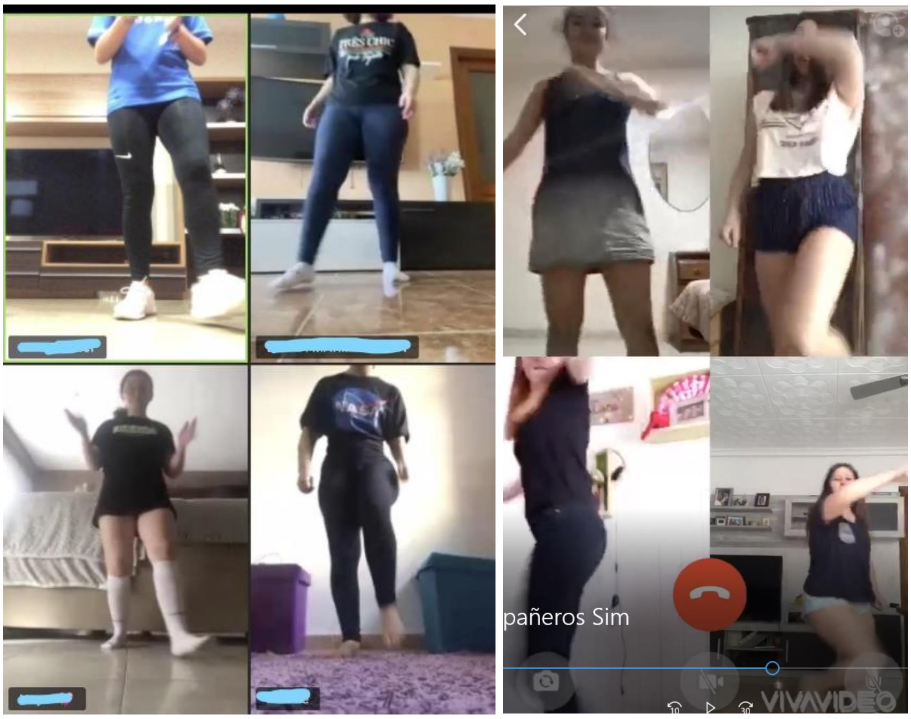


Figure 2. *Dance and rhythm activities*

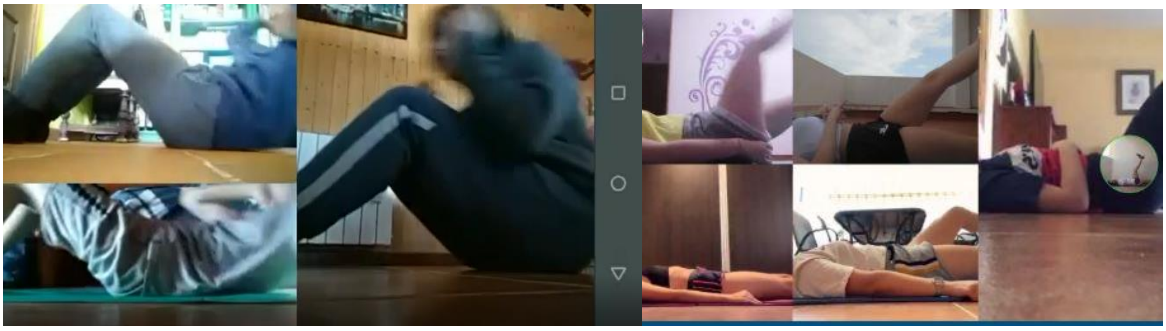


Figure 3. *Muscle-strengthening activities*

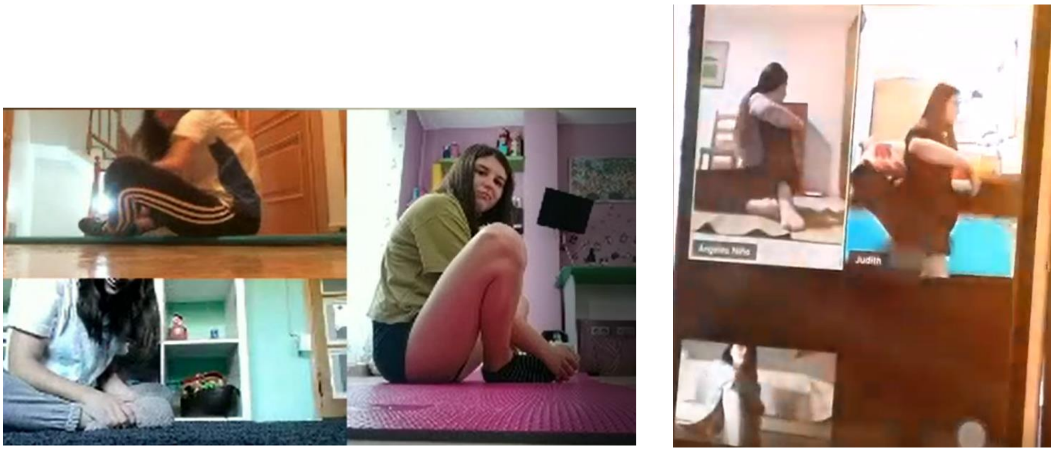


Figure 4. *Yoga, flexibility and stretching activities*

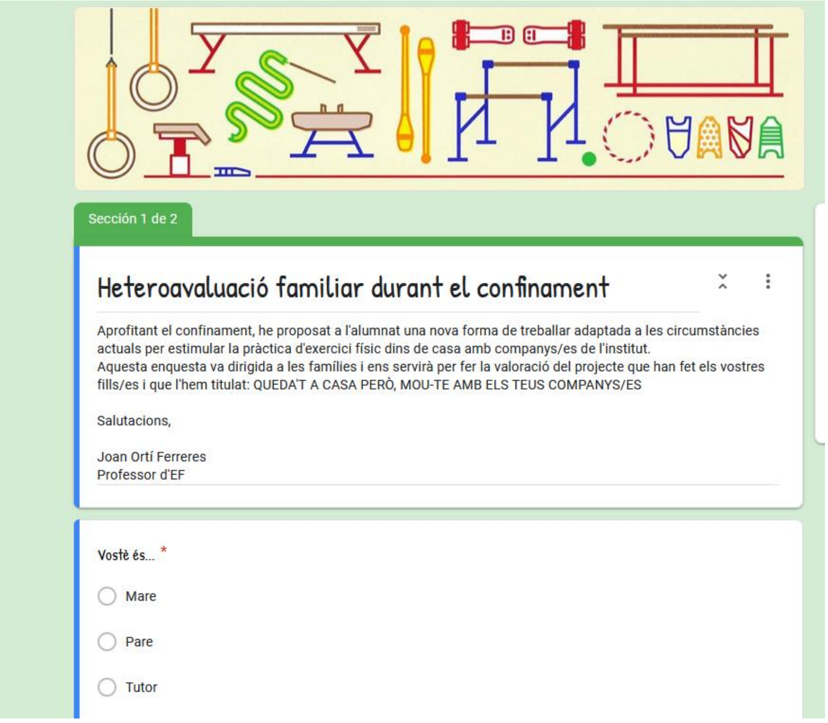
All students were at home and they needed to use new technologies as computers, laptops, mobile phone, tablet, etc. and different App. Each student and team decided that tools they had to use. Most common software used were WhatsApp, Hangout, Zoom, Meet, etc. Meeting was celebrated during 3 weeks and at the end of each week, 1st High School course student had to reflect on everything that had happened. After he/she had to send to the Physical Education teacher.

Vast benefits:

We divided the benefits to the educative community in some groups:

- Compulsory Secondary School Students (14 and 15 years old).
- These students Families
- 1st High School students.

To know the project results, we created two forms (google form). One form was for families and other for students. In these forms, we tried to find the evolution of hygiene habits, working habits, physical exercise, relations with other students and as they use new technologies during the project development.



Heteroavaluació familiar durant el confinament

Aprofitant el confinament, he proposat a l'alumnat una nova forma de treballar adaptada a les circumstàncies actuals per estimular la pràctica d'exercici físic dins de casa amb companys/es de l'institut.
Aquesta enquesta va dirigida a les famílies i ens servirà per fer la valoració del projecte que han fet els vostres fills/es i que l'hem titulat: QUEDA'T A CASA PERÒ, MOU-TE AMB ELS TEUS COMPANYS/ES

Salutacions,

Joan Ortí Ferreres
Professor d'EF

Vostè és... *

○ Mare
○ Pare
○ Tutor

Figure 5. *Family form*

RESULTS & DISCUSSION

At the beginning, student participation in the project was about 83,24 % students (90.2% and 77.2% students of 3rd and 4th Compulsory Secondary School and 84.8% 1rst High School). Project was finished for 81,2% students.

Students form about the project was completed by 82 students.

Data revealed that 15,9% of students did new relations with others high school students; 43.9% had relations with students that they had seen at high school but they hadn't had relations and, 40.2% answered that they had relations with their friends.

Question about the student attitude to do the project data revealed that 32.9% of students were excited with the project, 57.3% was interested and 9.8% didn't interested in it but they did it.

When we asked about if the project helped to do more physical exercise to students, 26.8% students answered that they did more physical exercise and they were happy; 45.1% students did more physical exercise; 24.4% did the same physical exercise; and 8.6% decreased their physical exercise.

Other question was about if the project helped to student to have a habit during the lockdown. Data revealed that 96.4% had a habit for meeting and doing physical exercise with their team.

About using new technologies 24.4% answered that they learnt to use some technologies unknowed to their; 57.3% used technologies that they knew but they found new possibilities; 18.3% explained that they only used technologies that they knew.

Also, we asked to students the opinion about the project. 92.7% of students appreciated very positively the project and only a 7.2% valued negatively.

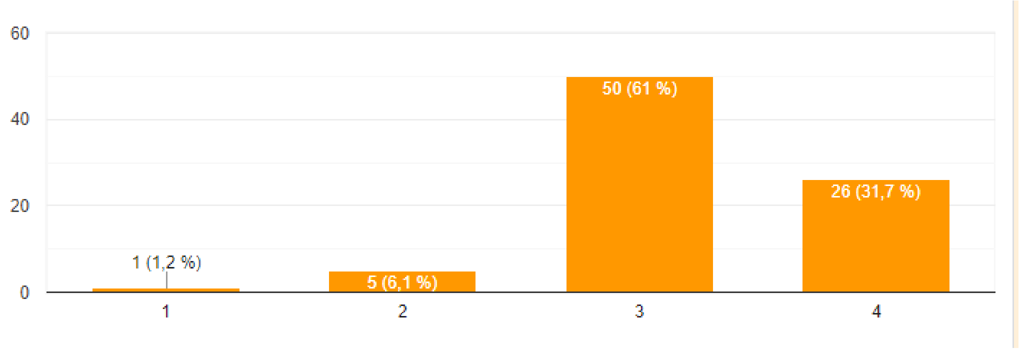


Figure 6. *Students opinions about the experience*

Families form was completed by 74 families and data revealed that 95.9% of families knew the project and 94.6% families think that their children were interested in the project.

Related about relations with other people, 10.8% families explained that their children had relations with new friends, 48.6% with people that they knew but they hadn't relations and 33.8% with their friends.

Findings of the study revealed that 80% of families think that their children did more physical exercise with the project and 18.9% think that they did the same. Only 1.1% of families think that they decreased the physical exercise during the project.

Families explained that their children had a working habit (91%) and children had learnt to us new technologies (29.7%) and other possibilities that technologies that they knew (50%) even 9.5% families said that children didn't learn any about new technologies.

Finally, we asked to families to give a score to the project. Families gave 5 points (32.4%) and 4 points (47.3%). It meant that families were liked with the projecte.

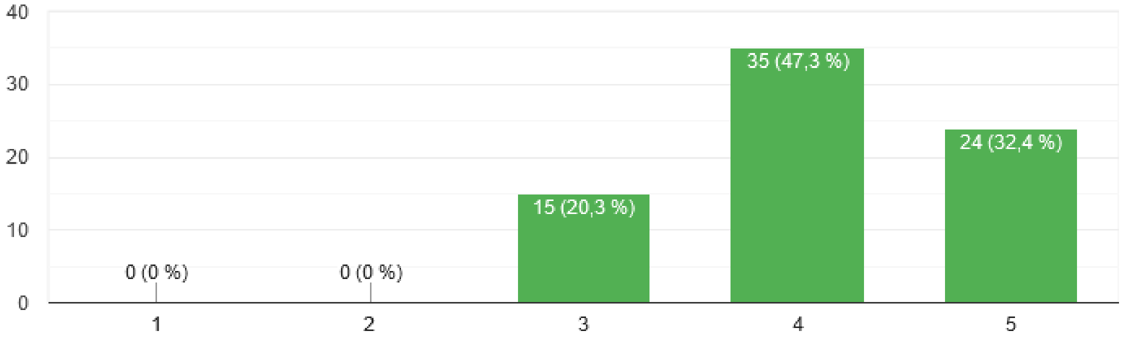


Figure 6. *Families opinions about the project experience*

CONCLUSION

Lockdown by COVID-19 was an unusual opportunity to research and to prove other methodologies because this is an exceptional moment of life.

In the education is important to get goals of the studies but it's always more important to protect students and their mental and physical healthy.

From Physical Education we have to help to the students to learn in movement, to learn about the movement and move them. We have to remember that one of the most important value of Physical Education subject is to do that students to enjoy the fun of participation and develop active lifestyles. It has many associated benefits for their life.

"Stay at home but keep on moving with your partners" project born after we analyzed the student situation at home. In this analysis we found that students wished doing physical exercise with their friends and they felt alone. It was the motor of the project: to help to the movement to students and to continue their Physical Education studies at home.

After some weeks, we found that families and students had enjoyed with the project. Project motivated to students to do physical exercise at home, to meet with other high school partners, in sometimes unknow students, to keep some healthy habits, to continuous the physical education lessons, to use new technologies and to find out other possibilities of them, and so on.

Service learning is a good methodology for students to work with other community people as hospital, elder people, foundations, non-governmental organizations (NGOs), nonprofit organization (NOPs), etc. In our case, community people were the Compulsory Secondary Students and their families. So, 1st High School offered the service to the educative community to help them.

This methodology helps to students to know the social reality, to participate with others community members, to learn with them, to reflective about the social problems and experiences, to connect the discipline knowledge with the social reality, etc. And when people stay at home is possible to use E-Service learning. “E-service learning may prove itself as one of the most effective ways to prepare students to solve the kinds of problems they will encounter once they start their careers.” (Krasny, 2020)

It’s necessary to use different methodologies more than it will be possible to lock down in the future.

Finally, In this link you can find a video about the project https://www.youtube.com/watch?v=Zly6Ok6nY9E&t=2s

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AN COMPARATIVE ANALYSIS ON SELECTED PHYSICAL FITNESS FACTORS OF KALABURAGI AND BIDAR DISTRICT SPORTS HOSTEL BOY'S ATHLETES

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Abstract

Athletes require the specific fitness with reference to strength, speed, flexibility and co-ordination. Fitness training equips the sports person to face the physical and physiological challenges that come his way in his competitive sports career. Specific physical fitness characteristics enable the player to perform the unusual movements required by the concerned sport. Physical fitness characteristics measurement plays an important role on the successful athlete's performances. These parameters further help to predict talents and finance on the potentially of best athletes for each sport. In purview of aforesaid the investigator aimed to study a comparative analysis on selected Physical Fitness factors of Kalaburagi and Bidar district sports hostel boy's athletes. To achieve the purpose of the study 60 samples were selected on random sampling method. The data were collected from Kalaburagi and Bidar districts on the selected physical fitness parameters like strength, speed, agility, flexibility, endurance and explosive strength with their respective tests. The results found that there is no significant difference in upper body strength between Kalaburagi and Bidar district sports hostel boy's athletes. Further the results shown significant difference in speed, agility, flexibility, endurance and explosive strength tests between Kalaburagi and Bidar district sports hostel boy's athletes.

Keywords: Strength, speed, agility, flexibility, endurance and explosive strength.

INTRODUCTION

Application of science and technology has greatly influenced modern sports. Sports performances are reaching to newer heights and success in sports performance today is not only a chance. Based on the knowledge of modern sports sciences, scientific principles of training and coaching and application of sophisticated modern testing and measuring techniques, it has now become possible to predict performance of the athletes at different levels of competitions.

Sports has emerged as a discipline not merely to discuss performance, techniques or records but also to study it as a means by which greater societal forces may be analyzed and through which various problems may be remedied.

Athletes require the specific fitness with reference to strength, speed, flexibility and co-ordination. Fitness training equips the sports person to face the physical and physiological challenges that come his way in his competitive sports career. Specific physical fitness characteristics enable the player to perform the unusual movements required by the concerned sport. Physical fitness characteristics measurement plays an important role on the successful athlete's performances. These parameters further help to predict talents and finance on the potentially of best athletes for each sport.

Physical parameters are very essential in athletics where the athletes have to perform with endurance and strength endurance for a longer period with breathing mechanism and along with lot of concentration attention and mental toughness. The athletes need to have greater physical fitness and mental toughness for effective physical fitness characteristics play an important role in deciding the performance level and also they have their importance in the field of athletics. Somewhat or altogether physical fitness parameters have definite effects on the performance of athletes.

One of the challenges confronting the coaches and sport scientists is to understand the physical fitness factors contributing to successful athletes.

Statement of the Problem:

The problem formulated for the present study is “An comparative analysis on selected Physical Fitness factors of Kalaburagi and Bidar district sports hostel boy’s athletes”.

Purpose of the Study:

Physical parameters are very essential in athletics where the players have to perform with endurance and strength endurance for a longer period with breathing mechanism. Based on these facts the present research study aims to analyze comparatively on selected physical fitness factors of Kalaburagi and Bidar district sports hostel boy’s athletes. Also the present study analyzes the differences in the physical fitness parameters on selected physical fitness factors of Kalaburagi and Bidar district sports hostel boy’s athletes. Hence the present study is taken into consideration to bring the changes in the present scenario of coaching and training means and methods for effective performance.

Objective of the Study:

- To analyze the differences in the selected physical fitness parameters among Kalaburagi and Bidar district sports hostel boy’s athletes.
- To suggest the better training means and methods for effective performance.

MATERIALS AND METHOD

The methodological aspects related to the present investigation have been described. The procedure and methods applied in sample selection, selection of subjects, selection of variables, selection of tests, instrument reliability of data, orientation of the subjects, collection of data, test administration, experimental design and statistical technique are present in this chapter.

Selection of Subjects:

The total 60 samples from Kalaburagi and Bidar districts were selected by random sampling method.

Sample Design:

Districts	No. of Subjects	Total
Kalaburagi	30	60
Bidar	30	

Selection of variables:

The investigator had gone through the available literature and had discussions with research supervisor and various experts before selecting variables. The availability of technique for the purpose of analysis, feasibility, reliability of the procedure and the outcome were extensively taken care before finalizing the variables. After analysing the various factors associated with the present study physical fitness variables like strength, speed, agility, flexibility, endurance and explosive strength were selected.

Criterion Variables:

Each sport demands specific requirement of physical capacities for successful performance, the importance of these parameters lays in the fact that in majority of the sports; it scores as the basis for good performance. The following physical parameters were selected. Physical Fitness parameters:

- Strength
- Speed
- Agility
- Flexibility
- Endurance
- Explosive strength

Selection of Tests:

The selected physical and physiological parameters and their respective tests to be administered are presented in Table 2.

Table 2: List of Variables and their respective Test

S. N.	Variables	Test
1.	Strength	Push-up test
2.	Speed	40 mtrs. Sprint test
3.	Agility	Illion's agility test
4.	Flexibility	Sit and Reach test
5.	Endurance	12 mtrs. Run and Walk test
6.	Explosive strength	Vertical jump test

Collection of Data:

The data were collected on total 60 samples from Kalaburagi and Bidar districts on the selected physical fitness parameters like strength, speed, agility, flexibility, endurance and explosive strength.

Test Administration:

The investigator visited to the sports hostels of Kalaburagi and Bidar districts and investigator approached the concerned authorities and explained about the purpose of the study and took permission for the same. Then the investigator briefly explained and oriented the subjects about the procedure and importance of the tests. Further investigator collected the data related to present study in the following methods,

Physical Fitness Parameters:

1. Speed: 40 Meter Sprint test
2. Agility: Illinois Agility Test:
3. Flexibility: Sit and Reach Test
4. Strength: Push-up test
5. Explosive strength: Vertical Jump Test:
6. Endurance: Cooper 12 minute run and walking Test:

Statistical Analysis:

Descriptive Statistics and paired t-test for comparison of selected physical parameters of sports hostel boy's athletes.

RESULTS AND DISCUSSIONS

Analysis of physical fitness parameters among Kalaburagi and Bidar districts sports hostel boy's athletes:

Table.No.1, Differences in upper body strength among Kalaburagi and Bidar districts sports hostel boys athletes

Paired Samples Statistics						
Variable	**Athletes**	**Mean**	**N**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
Upper Body Strength	Kalaburagi	6.04	30	1.57	1.94	.067
	Bidar	5.43	30	0.45		

Significant at 0.05 level

It can be seen from the table.No.1 that the value t-statistics 1.94 of paired samples test between Kalaburagi and Bidar district sports hostel boy's athletes respectively. The t-value is not significant as the p-value (.067) is more than 0.05. Thus, it can be concluded that the mean values of upper body strength test between Kalaburagi (6.04) and Bidar (5.43) are similar. In other words there is no significant difference in upper body strength between Kalaburagi and Bidar district sports hostel boy's athletes.

Table.No.2, Differences in speed among Kalaburagi and Bidar districts sports hostel boys athletes

Paired Samples Statistics						
Variable	**Athletes**	**Mean**	**N**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
Speed	Kalaburagi	18.71	30	0.83	17.09*	.000
	Bidar	20.66	30	0.98		

Significant at 0.05 level

It can be seen from the table.No.2 that the value t-statistics 17.09 of paired samples test between Kalaburagi and Bidar district sports hostel boy's athletes respectively. The t-value is significant as the p-value (.000) is less than 0.05. Thus, it can be concluded that the mean values of speed test between Kalaburagi (18.71) and Bidar (20.66) are not similar. In other words there is significant difference in speed between Kalaburagi and Bidar district sports hostel boy's athletes.

Table.No.3, Differences in endurance among Kalaburagi and Bidar districts sports hostel boys athletes

Paired Samples Statistics						
Variable	**Athletes**	**Mean**	**N**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
Endurance	Kalaburagi	2625.40	30	507.53	6.43*	.000
	Bidar	2504.60	30	486.09		

Significant at 0.05 level

It can be seen from the table.No.3 that the value t-statistics 6.43 of paired samples test between Kalaburagi and Bidar district sports hostel boy's athletes respectively. The t-value is significant as the p-value (.000) is less than 0.05. Thus, it can be concluded that the mean values of endurance test between Kalaburagi (2625.40) and Bidar (2504.60) are not similar. In other words there is significant difference in endurance between Kalaburagi and Bidar district sports hostel boy's athletes.

Table.No.4

Differences in agility among Kalaburagi and Bidar districts sports hostel boys athletes

Paired Samples Statistics						
Variable	**Athletes**	**Mean**	**N**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
Agility	Kalaburagi	24.05	30	5.74	7.45*	.000
	Bidar	26.80	30	4.82		

Significant at 0.05 level

It can be seen from the table.No.2 that the value t-statistics 7.45 of paired samples test between Kalaburagi and Bidar district sports hostel boy's athletes respectively. The t-value is significant as the p-value (.000) is less than 0.05. Thus, it can be concluded that the mean values of agility test between Kalaburagi (24.05) and Bidar (26.80) are not similar. In other words there is significant difference in agility between Kalaburagi and Bidar district sports hostel boy's athletes.

Table.No.5

Differences in flexibility among Kalaburagi and Bidar districts sports hostel boys athletes

Paired Samples Statistics						
Variable	**Athletes**	**Mean**	**N**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
Flexibility	Kalaburagi	32.80	30	4.84	6.16*	.000
	Bidar	30.80	30	5.80		

Significant at 0.05 level

It can be seen from the table.No.5 that the value t-statistics 6.16 of paired samples test between Kalaburagi and Bidar district sports hostel boy's athletes respectively. The t-value is significant as the p-value (.000) is less than 0.05. Thus, it can be concluded that the mean values of flexibility test between Kalaburagi (32.80) and Bidar (30.80) are similar. In other words there is significant difference in flexibility between Kalaburagi and Bidar district sports hostel boy's athletes.

Table.No.6

Differences in explosive strength among Kalaburagi and Bidar districts sports hostel boys athletes

Paired Samples Statistics						
Variable	**Athletes**	**Mean**	**N**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
Explosive Strength	Kalaburagi	12.75	30	2.35	4.15*	.001
	Bidar	9.75	30	4.57		

Significant at 0.05 level

It can be seen from the table.No.6 that the value t-statistics 4.15 of paired samples test between Kalaburagi and Bidar district sports hostel boy's athletes respectively. The t-value is significant as the p-value (.001) is more than 0.05. Thus, it can be concluded that the mean values of explosive strength test between Kalaburagi (6.04) and Bidar (5.43) are similar. In other words there is significant difference in explosive strength between Kalaburagi and Bidar district sports hostel boy's athletes.

CONCLUSION

1. There is no significant difference in upper body strength between Kalaburagi and Bidar district sports hostel boy's athletes.
2. There is significant difference in speed between Kalaburagi and Bidar district sports hostel boy's athletes.
3. There is significant difference in endurance between Kalaburagi and Bidar district sports hostel boy's athletes.
4. There is significant difference in agility between Kalaburagi and Bidar district sports hostel boy's athletes.
5. There is significant difference in flexibility between Kalaburagi and Bidar district sports hostel boy's athletes.
6. There is significant difference in explosive strength between Kalaburagi and Bidar district sports hostel boy's athletes.
7. It is suggested from the study that core muscle exercise training is very much essential to keep the optimum level of performance.

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EFFECT OF MOBILITY TRAINING ON FLEXIBILITY AND ABDOMINAL STRENGTH AMONG FOOTBALL PLAYERS

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ABSTRACT

The purpose of the study was to find out the effect of mobility training on flexibility and abdominal strength among football players**.** To achieve the purpose of this study, 20 male football players were randomly selected as subjects from the M.D.T Hindu College, Tirunelveli, Tamilnadu, India. Their age ranged from 18 to 22 years. The selected participants were randomly divided into two groups such as Group 'A' mobility training (n=10) and Group 'B' acted as control group (n=10). Group 'A' underwent mobility training for three days per week and each session lasted for an hour for six weeks. Control group was not exposed to any specific training but they were participated in regular activities. The flexibility was assessed by sit and reach test and abdominal strength was assessed by bent knee sit up test. The pre and post-tests data were collected on selected criterion variables prior and immediately after the training program. The pre and post-test scores were statistically examined by the Analysis of Co-Variance (ANCOVA) for selected variable at the significant of 0.05 level.

Kew words: Mobility Training, Flexibility, Abdominal Strength, Football Players

INTRODUCTION

There are number of techniques used in performing mobility exercise to increase the range of movement. The simplest and safest is the active or slow stretch method. The position should then be held for about 10-15 seconds. The stretch is then released and reposts the exercise a number of times. When holding the stretch position others parts of the body should be relaxed as possible. It also helps to concentrate on relaxing the muscles, which are being stretched. Garter flexibility can be achieved in warm rather than cold conditions. It is therefore important that the runner increase the heat in his muscle through light running or jogging before stitching. In cold condition it will be necessary to wear warm clothing whilst stretching .but care must be taken ensures the tight clothing does not restrict movement. Mobility training is best undertaken in a warm environment, which usually means indoors in our climate. Mobility or mobilization is not to be confused with warm-up. The primary focus of mobility is to improve positions thereby improving power output and performance. Warm-up is designed to prepare the body for movement; it does not solve positional problems. Most group classes at involve a warm-up consisting of dynamic range of motion movements, which will certainly help to prepare you for the impending training session. [2] Abdominal muscles strong is more important than other muscles strength for runners, which also include the lower back, hip flexors and rotators and gluteus, along with the abs, keep body stable and upright, among other benefits. Strengthening options for your abdominal muscles include the traditional, such as crunches and planks, as well as Pilates and yoga, and should be incorporated into your daily exercise routine [3].Yoga not only helps improve flexibility and relieve stress (which studies show helps reduce belly fat), but your practice can also target your abdominal muscles in a much more functional and efficient way than any amount of crunches .Abdominal Strength: The maximum force a muscle/group of muscles can apply against a resistance.

Purpose of the Study

The purpose of the study was to find the effect of mobility training on flexibility and abdominal strength among football players.

METHOD

To achieve the purpose of this study, 20 male football players were randomly selected as subjects from the M.D.T Hindu College, Tirunelveli, Tamilnadu, India. Their age ranged from 18 to 22 years. The selected participants were randomly divided into two groups such as Group 'A' mobility training (n=10) and Group 'B' acted as control group (n=10). Group 'A' underwent mobility training for three days per week and each session lasted for an hour for six weeks. However, control group was not exposed to any specific training but they participated in the regular schedule. The flexibility was assessed by sit and reach test and the abdominal strength was assessed by bent knee sit up test was selected as variables. The pre and post tests data were collected on selected criterion variables prior and immediately after the training program. The pre and post-test scores were statistically examined by the Analysis of Co-Variance (ANCOVA) for selected variable. The level of significance was fixed at .05 level of confidence, which was considered as appropriate.

Analysis of Data

Table I, Means and Dependent 'T'-Test for the Pre and Post Tests on Flexibility of Experimental and Control Groups (In Centimeters)

Criterion variables	Mean	Experimental Group	Control Group
Flexibility	Pre test	22.18	22.09
	Post test	29.41	22.15
	't'test	11.08*	1.07

*Significant at .05 level. (Table value required for significance at .05 level for 't'-test with df 9 is 2.26)

From the table I the dependent 't'-test values of flexibility between the pre and post tests means of experimental groups were greater than the table value 2.26 with df 9 at .05 level of confidence, it is concluded that experimental group had significant improvement in the flexibility compared to control group.

Computation of Analysis of Covariance

The descriptive measures and the results of analysis of covariance on the criterion measures were given in the following tables.

Table – II

Computation of Mean and Analysis of Covariance on Flexibility of Experimental and Control Groups

	Experimental Group	**Control Group**	**Source of Variance**	**Sum of Squares**	**df**	**Mean Square**	**F**
Flexibility (Adjusted Post Mean)	28.96	22.35	BG	61.21	1	61.21	10.41*
			WG	123.48	17	5.88	

* Significant at 0.05 level. Table value for df 1, 17 was 4.45

The above table indicates the adjusted mean value on abdominal strength of experimental and control groups were 28.96 & 22.35 respectively. The obtained F-ratio of 10.41 for adjusted mean was greater than the table value 4.45 for the degrees of freedom 1 and 17 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among experimental and control groups on flexibility.

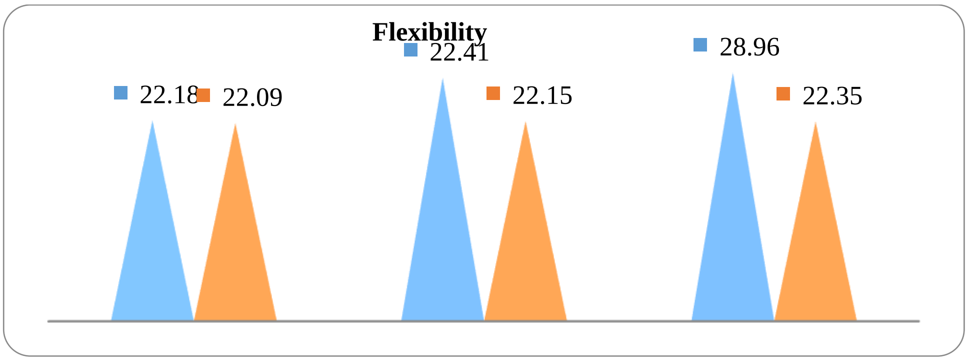

Figure I: Pre, Post and Adjusted Post Tests Mean Values of Experimental and Control Groups on Flexibility

Table III, Means and Dependent 'T'-Test for the Pre and Post Tests on Abdominal Strength of Experimental and Control Groups (In Numbers)

Criterion variables	**Mean**	**Experimental Group**	**Control Group**
Abdominal Strength	Pre test	28.47	28.09
	Post test	34.52	28.37
	't'test	27.31*	0.98

*****Significant at .05 level. (Table value required for significance at .05 level for 't'-test with df 9 is 2.26)

From the table II the dependent 't'-test values of abdominal strength between the pre and post tests means of experimental groups were greater than the table value 2.26 with df 9 at .05 level of confidence, it is concluded that experimental group had significant improvement in the abdominal strength compared to control group.

Table – IV
Computation of Mean and Analysis of Covariance on Abdominal Strength of Experimental and Control Groups

	Experimental Group	**Control Group**	**Source of Variance**	**Sum of Squares**	**df**	**Mean Square**	**F**
Abdominal Strength (Adjusted Post Mean)	35.24	28.31	BG	66.19	1	66.19	18.49*
			WG	60.86	17	3.58	

* Significant at 0.05 level. Table value for df 1, 17 was 4.45

The above table indicates the adjusted mean value on abdominal strength of experimental and control groups were 35.24 & 28.31 respectively. The obtained F-ratio of 18.49 for adjusted mean was greater than the table value 4.45 for the degrees of freedom 1 and 17 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among experimental and control groups on abdominal strength.

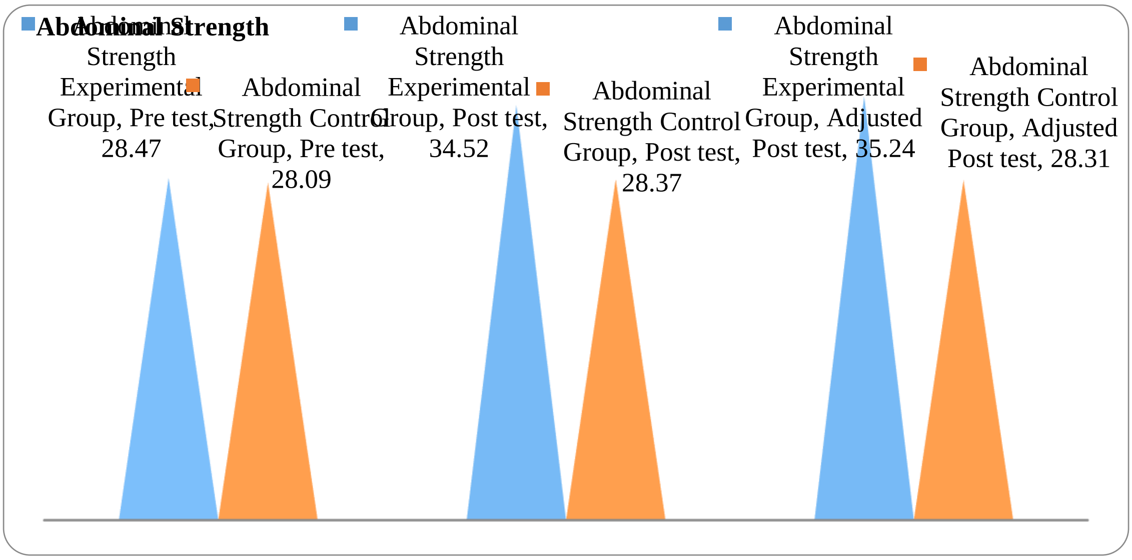

Figure II: Pre, Post and Adjusted Post Tests Mean Values of Experimental and Control Groups on Abdominal Strength

CONCLUSION

1. There was significant improvement on flexibility due to the Effect of mobility training among football players.

2. There was significant improvement on abdominal strength due to the Effect of mobility training among football players.
3. However the control group had not shown any significant improvement on abdominal strength.

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ASSOCIATION OF SEDENTARY WOMEN EMPLOYEES AND SELF ESTEEM - AN EXPERIMENTAL STUDY WITH RESPECT TO LOW IMPACT AEROBIC DANCE

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ABSTRACT

The primary aim of the study was to examine the effect of twenty-three weeks of low-impact aerobic dance exercise on self-esteem (self-respect) among sedentary women employees, specifically in Kannur district of Kerala state. Sedentary women participants (age range = 30 – 40 years; N = 40 were randomly assigned to two groups: experimental and control group. Training was administered to the experimental group for 50 minutes, 3 days per week, for 23 weeks. Paired T- test indicated significant influence for self-esteem of sedentary women employees in the experimental group compared to the control group. "Aerobic dancing women employees group" found the most benefitted.

Keywords: Self-esteem, Aerobic dance, low impact, Sedentary, Rosenberg Questionnaire

INTRODUCTION

Aerobic dance exercise has got a deep impact in the Self Esteem ((Self-respect) level of sedentary women employees apart from physiological and biochemical impact. Aerobic dance exercise is one of the most common exercises practice all over the world. Aerobic dance is a popular activity among all age groups, and is more popular among middle-aged women employees. Synchronization of music and rhythmic dance helps to mobilize the movement of selected body parts allowing for an overall body workout. Self-esteem is a positive or negative orientation towards oneself. Low impact aerobic dance exercise is a subdivision of physical exercise that improves cardiovascular and respiratory health. During aerobic exercise, a person rhythmically contracts her muscle groups to move her body against gravity. At the moderate level, a person will produce a slight increase in her breathing and heart rate. At the vigorous level, a person will produce a large increase in his breathing and heart rate. The amount of exercise required to produce health benefits, according to William Haskell, is to do with a Dose-Response relationship. According to this theory, it is necessary to expend approximately 300 calories per exercise session every two to three days at a moderate level of intensity to receive substantial benefits from exercise. The majority of research indicates that aerobic exercise produces psychological effects in people who participate in aerobic dance exercises at moderate levels, vigorous levels, or moderate and vigorous levels combined. In this study, the investigator was interested in analyzing the effects that low-impact aerobic dance exercise has on Self Esteem level of sedentary women employees in Kannur District of Kerala. Walking, biking and elliptical training are all good examples of Low impact aerobic exercises compared to high impact running and jumping. Low impact doesn't necessarily mean low intensity.

The World Health Organization has already predicted that mental ill-health will be second only to cardiovascular diseases as the world's leading cause of death and disability by the year 2025. Although people typically deal with these mood disturbances through psychological counseling, drug therapy,etc, more and more individuals are looking to do exercise and physical activity to promote their psychological well-being. In fact, many researchers and Professors have observed that exercises especially aerobic dance activities enhance feelings of well-being, particularly in improving Self Esteem. Sonstroem et al showed that specific and general perceptions of physical competencies positively impact on Self Esteem

This study will apply a pre and posttest to compare the effect of the low-impact aerobic dance exercise on Self Esteem among sedentary women employees.

MATERIALS AND METHOD

The participants received general information about the main goals of the study and were informed on the voluntary basis of their participation and anonymity of their data. Participants were asked to submit their written consent before filling the Rosenberg self-esteem questionnaire. Paired T-test was used to examine the effect of low impact aerobic dance exercise on self-esteem scores of sedentary women employees. The Study was carried out in the School of Physical Education and Sports sciences, a research Centre of Kannur University, Kerala. The research was performed on a sample of 40 sedentary employees (women) in Kannur. Further to that, their age range from 30-40 years, subjects were randomly assigned in control group (n=20) and in the experimental group (n=20). The experimental group meets 3 times a week on Monday, Wednesday, and Friday at 4.30pm until 5.30pm in aerobics room while the control group met similar day and venue but at 5.30pm to 6.30pm. Group 1, the experimental group, receives treatment between the pre-test and post-test where subjects have to go through 69 sessions, 50 minutes each (15 mts warm up + 20 minutes aerobic workout + 15 minutes warm down). On the other hand, Group 2, the control group was instructed not to do any kind of physical exercises. This inventory was based on the result of the data collected by the Rosenberg self esteem questionnaire and the data were collected using the questionnaires a day prior to the treatment and the last day of the training schedule for experimental group while for control group, one day prior to the general instruction and the last day of their dispersal.

RESULTS

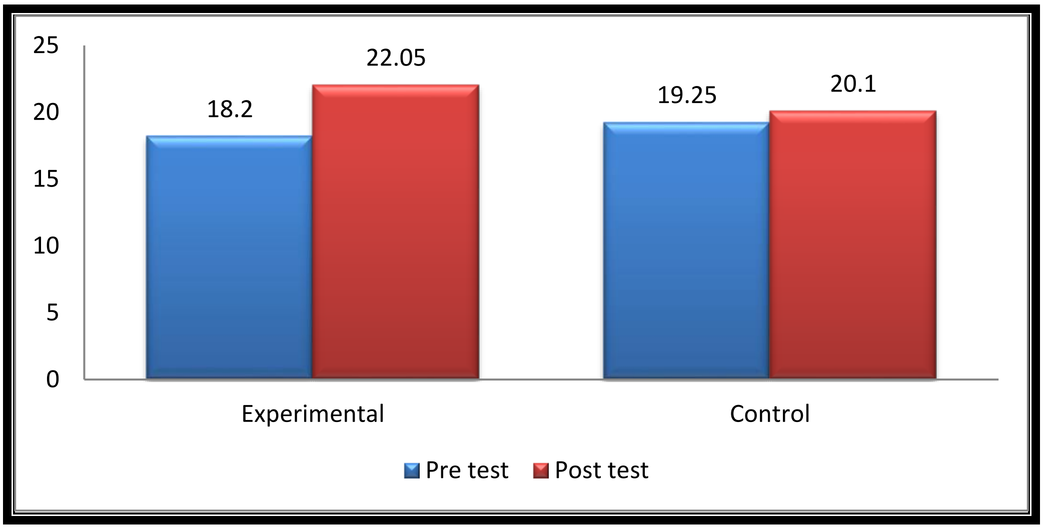
Table 1, T-ratio of experimental and control group on self esteem

Control Factors	Pre test			Post test			t-ratio
	N	Mean	SD	N	Mean	SD	
Experimental	20	18.20	3.91	20	22.05	2.81	7.72*
Control	20	19.25	3.68	20	20.10	3.58	3.34

* Significant at the 0.05 level of confidence

Since the calculated “t” value of 7.72 is higher than tabulated ‘t’ value of 3.71 at 0.05 level of significance with 19 degrees of freedom, the above table indicates that there exist a noticeable difference between the pre and post test performance on self esteem,. In the case of control group there was no noticeable difference in self esteem.

Figure 1, Pre and post test mean scores of self esteem



ANALYSIS, DISCUSSION AND INTERPRETATION

The prime purpose of the study was to examine the association of low-impact aerobic dance exercise on self-esteem of sedentary women employees in Kannur district of Kerala. It was hypothesized that the group undergoing the low-impact aerobic dance would improve self esteem as against the control group. The results supported the research hypothesis. With respect to psychological health, the experimental group had a greater improvement in self-esteem level at the end of the 23-week program than the control group. The success of the low-impact dance routine program in the present study was likely due to the application of total body movements and dance forms making use of local dance music, for the experimental group. Sonstroem and Morgan's framework of Physical Activities and Self Esteem suggests that exercising is associated with global Self Esteem through perceptions of self-efficacy, physical competence and physical acceptance. In tune with these studies Physical activities have been found to be closely associated with higher Self-esteem among middle aged women employees.

Whether exercise produces increased self-efficacy, thereby improving self-esteem is open for discussion. Further to the discussion, it would be reasonable to suggest that Self Esteem of the participants in the current study may have improved because of the effect of music.

CONCLUSION

In summary, this study would serve as a supplementation for further studies and developments in the field of sedentary working class. All of these research efforts work towards improving the future of preventative medicine and achieving better lifestyle of employed sedentary women suffering from low level Self Esteem to improve performance and increase productivity in their career. In short, a low-impact aerobic dance exercise routine is indeed a simple and cost-effective method to enhance self esteem. In a nutshell a low-impact aerobic dance exercise routine improves the population's psychological well-being especially Self esteem and which in turn promotes total quality of employees.

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EFFECT OF PLYOMETRIC TRAINING ON SPEED AMONG COLLEGE GOING WOMEN ATHLETES

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ABSTRACT

Sports training aims to improving the performance of sports persons, weights training and plyometric training are very popular now a days and effective training methods to promote higher performance in sprinting and jumping events. Plyometric is a type of exercise training designed to produce fast, powerful movements and improve the functions of the nervous system, generally for improving performance in sports. Plyometric training which used to improvements in vertical jump, performance acceleration, leg strength, muscular power increased joint awareness. For the purpose of the study was Thirty (N=30) College Going Women Students Ramangara District, Bangalore University were selected as subjects at random and the age ranged between 18 to 21 years. The selected subjects were randomly divided into two equal groups. Each group 15 subjects (N=15). The groups were one experimental group and One Control Group. During the training period, the experimental group underwent their respective training program for eight weeks 3 days per week and a session on each day apart from their regular activities. Control group did not participate in any specific training. Speed was taken as variable for this investigation exercises were used in this experiment. These are the exercise used as plyometric in this study a) Split Squat jump b) squat jump c) jumps in height d) Single leg hop e)clapping push up f) Forward Bounding jump g)Forward hops h)press jacks i) front to back hops. The pre and post test were conducted one day before and after the experimental treatment.

Key words: Plyometric Training, speed, Power, Performance

INTRODUCTION

The word “training” has been a part of human language since ancient times. It denotes the process of preparation for some task. This process invariably extends to a number of days and even months and years. The term training refers to the acquisition of knowledge, skills and competencies as a result of the knowledge that relate to specific useful competencies.

Sports training is a scientifically based and pedagogically organized process which through planned and systematic, effect on performance ability and performance readiness aims at sports perfection and performance improvement as well as at the contest in sports competition.

PLYOMETRICS

Plyometric is defined as exercise that enables a muscle to reach maximum strength in short time as possible. The speed strength ability is known as power. For an exercise to be truly plyometric, it must be movement preceded by an eccentric contraction. This results not only stimulating the proprioceptors sensitive to rapid stretch, but also in loading the serial elastic components (the tendons and cross bridges between muscle fibers) with a tension force from which they can rebound. A reasonable amount of flexibility is important when beginning the plyometric training program (Donald 1998)

DEVELOPMENT OF PLYOMETRIC TRAINING

Plyometrics is the term now applies to exercises that have their roots in Europe, where they were term plyometrics was first coined in 1975 by Fred Wilt, one of America's more forward-thinking track and field coach. Based on Latin origins, Plyo+Metrics is interpreted to mean, "Measurable increases". These seemingly exotic exercises were thought to be responsible for the rapid competitiveness and growing of superiority of Eastern Europeans in track and field event.

PLYOMETRICS FOR SPORTS

Plyometrics bridges the gap between strength and speed. If a plyer wants to improve athletic performance, the transition from strength training to power training will play an integral part in success. The maximum strength takes 0.5 to 0.7 seconds to produce. Yet most explosive, athletic movements occur much more rapidly. Whether objective is to accelerate faster, hit the ball harder, kick faster, more around the court more quickly, jump higher or throw further. The key to improving your power and performance lies in generating the highest possible force in the shortest possible time. Plyometric plays a primary role in this training objective

METHOD

For the purpose of the study was Thirty (N=30) College Going Women Students Ramangara District, Bangalore University were selected as subjects at random and the age ranged between 18 to 21 years. The selected subjects were randomly divided into two equal groups. Each group 15 subjects (N=15). The groups were one experimental group and One Control Group. During the training period, the experimental group underwent their respective training program for eight weeks 3 days per week and a session on each day apart from their regular activities. Control group did not participate in any specific training. Speed was taken as variable for this investigation exercises were used in this experiment. These are the exercise used as plyometric in this study a) Split Squat jump b) squat jump c) jumps in height d)Single leg hop e)clapping push up f) Forward Bounding jump g)Forward hops h)press jacks i) front to back hops. The pre and post-test were conducted one day before and after the experimental treatment.

DATA ANLYSIS

Mean and standard deviation were calculated for speed for the training group, and the data were analysed by using analysis of covariance (ANCOVA) the statistical significance level was fixed at 0.05

RESULT AND DISCUSSION

TABLE-1

Analysis of Covariance on Speed of Experimental Group and the Control Group

Test		**Experiment group**	**Control group**	**SOV**	**SS**	**df**	**MS**	**F-ratio**
Pre-test	Mean	13.10	12.99	B	0.014	1	0.014	0.61
	SD	0.25	0.21	W	0.64	28	0.023	
Post-test	Mean	12.51	12.95	B	0.63	1	0.63	52.5*
	SD	0.07	0.22	W	0.31	28	0.012	
Adjusted Post test	Mean	12.49	12.95	B	0.63	1	0.63	57.27*
				W	0.31	27	0.011	

*Significant F+(df1, 28) (0.05)=4:41 & F=(df1, 27) (0.05)=4.45; (p<_0.05)

Table 1. Shows that the pre test mean of experimental and control groups on speed are 13.10 and 12.99 respectively. The obtained F ratio of 0.61 for the test mean is less than the table value 4.41 for df 1 and 27 required for significance at 0.05 levels. The post tests mean of experimental and control groups are 12.51 and 12.95 respectively. The obtained F ratio of 52.5 for post-test mean is greater than the table value 4.41 for df 1 and 27 required for significant at 0.05 level. The adjusted post test mean of experimental and control groups are 12.49 and 12.95 respectively. The obtained F ratio of 57.27 for adjusted post-test mean is also greater than the

required table value 4.45 for df1 and 28 required for significant at 0.05 levels. The result of the study indicated that there was a significant difference in speed between the post-test and adjusted post-tests mean of the experimental training group and the control group at level 0.05.

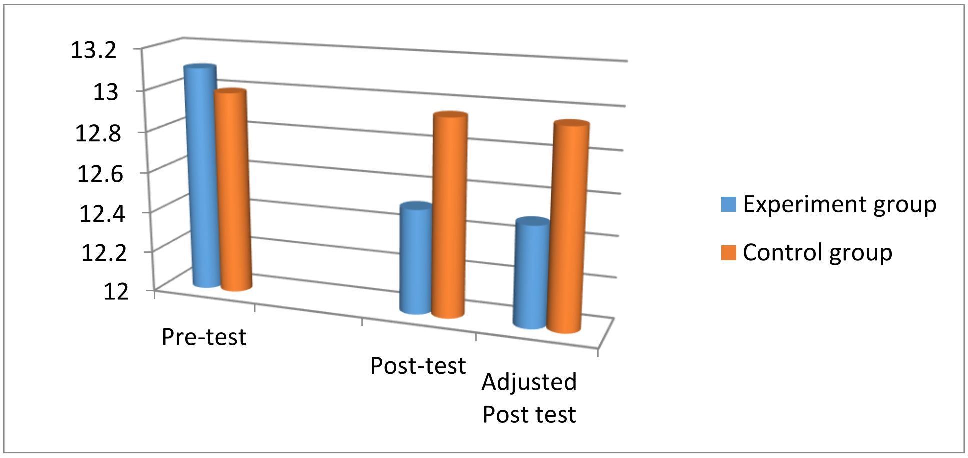

Figure -1

From the results of the present study and literature, it is concluded that the dependent variables such as speed was significantly improved due to the moderate intensity plyometric training. The pre, post and adjusted post mean values on speed of the experimental group and the control group are presented I figure-1.

CONCLUSION

The speed can be improved during the age between 18 to 21 years of female undergraduate's students and favor the prescription of moderate intensity plyometric training during the initial adaptation period. From this study we can conclude that there was a significant improvement on speed due to moderate plyometric training as compared to control group.

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EFFECT OF IRON RICH COOKIES IN YOUNG GIRL ATHLETES OF BANASTHALI VIDYAPITH

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ABSTRACT

There are many factors responsible for the good performance of athletes. One of those is the nutritional status of a sports person. Due to the lack of nutritional knowledge the sports person faces many problem during the consumption of food. Major nutrients required in adolescent athletics are carbohydrates, protein, fat, vitamins and minerals. Each one of these has specific function in providing nourishment for the body. Intake of carbohydrate during exercise helps in maintenance of carbohydrate oxidation, prevents hypoglycemia and also has a affirmative effect on the central nervous system. The advantage of taking protein after exercises is well known. Fat is a major source of energy in athletes. Calcium and vitamin D are the crucial nutrients for sports person. Studies showed Iron deficiency is more prevalent in female athletes. Therefore, this study aims to the development of iron rich cookies which were incorporated by lotus stem powder and gingelly seeds. The developed cookies were supplemented for 45 days to the adolescent girls in Banasthali Vidyapith. This study found that the work performance was enhanced by the supplementation of iron rich cookies.

Keywords; Performance, nutritional, nourishment, hypoglycemia, supplementation.

INTRODUCTION

In the physical as well as cognitive development of adolescents or growing children, there are many nutrients which helps, especially iron. Pregnant women are more vulnerable to anemia ranging from 33% to 89%. The dissemination of anemia is higher than 60% in adolescent girls. Due to various reasons such as poverty, imbalanced diet, prevalent diseases, physiological changes (pregnancy and lactation) and others, the anemia spreading highly among developing countries (Jain, 2013).

Bakery products get prepared at wide range by using refined flour and sugar. All age groups consume bakery products in which cookies are always the most preferred one. Basically cookies are composed of some main ingredients such as refined flour, sugar, salt and water. In similar to biscuits, cookies are also beneficial food to include mixed flour from a health point of view. In India, Cookies are popular in both rural and urban populations as it a convenient food for all. Popularity gained by cookies due to various reasons such as low cost among other processed or baked foods, various flavors, easy availability and long shelf life. Enrichment of proteins can be attained through the incorporation or fortification of iron-rich materials. In this study few iron rich sources has been used in making of product for adolescent girls'.

Lotus stem (*Nelumbium nelumbo*), belongs to the family *Nelumbonaceae*. It is also known as lotus cucumber, bean of India and sacred beans. It is a very good source of iron and data also have shown positive results on the supplementation of lotus stem in adolescent girls. Lotus stem is a well-balanced diet that is low in fat, but high in protein, minerals and vitamins. Lotus stem became a popular topic in scientific research due to its nutritional and therapeutical properties. The benefit of lotus stem is obscured by the majority population of the world.

Gingelly seeds, also known as sesame seeds (*Sesamum indicum* L.) belong to the family *Pedaliaceae*. It is a good source of calcium and copper. It is also rich in minerals such as phosphorus, iron, magnesium, manganese, zinc and vitamins. Potential health benefits of the seeds include anti-oxidative, anticancer, anti-hypersensitive and anti-immune regulatory actions. The seeds are used in the production of oils, pastas, salads, and various edible formulations.

There is no available data of these ingredients which has an effect on physical work capacity (PWC), whereas the supplementation of IFA (iron folic acid) or medicinal iron has shown effective results on physical work performance of girls. So, this study was proposed for the evaluation of the intervention effect of iron rich lotus stem with calcium-rich gingelly seeds on physical work capacity among young athlete girls.

MATERIAL AND METHOD

The present study was carried out on adolescent girls of Banasthali Vidyapith (Rajasthan) to check the effectiveness of iron based food supplement on hemoglobin level and their physical work capacity.

Product Development and Sensory Evaluation

Lotus stem, Gingelly seeds or sesame seeds were purchased from the local market of Jaipur, Rajasthan. At first, the lotus stems were washed, peeled properly and cut into small pieces. Then these cutted stem pieces were boiled in water for 10-15 minutes of time to lessen the amount of oxalate content from it. Then it was allowed to dry. After that the dried stem was finely converted into a powder using a mixer grinder.

A cookie was standardized based on content of iron in it. Two dissimilar kind of iron rich cookies were prepared by incorporation of lotus stem powder (LSP) in the ratio of 10% and 20% and gingely seeds in the ratio of 5% and 10% respectively. In addition, these dishes were estimated for their acceptability by the consumers in relation to its appearance and taste. Recipes with 5% inclusion of lotus stem powder and 10% gingelly seeds were found to be most acceptable and used for further studies. Sensory evaluation of cookies was performed by a 20 trained panel using a 9 point hedonic scale.

Table 1- Nutritional composition of Lotus stems dry, Gingelly seeds and iron rich cookies

Nutrients	Lotus stem dry	Gingelly seeds	Iron rich cokies
Moisture(g/100g)	9.5	5.3	10.61
Protein(g/100g)	4.1	18.3	6.96
Fat(g/100g)	1.3	43.3	21.29
Calcium(mg/100g)	405	1450	203.65
Iron(mg/100g)	60.6	9.3	6.35

Table 2- Sensory Evaluation of iron rich cookies with different variations

S.No.	Attributes	Standard	Variant A	Variant B
1.	Color	8.3±0.67	7.7±1.14	7.5±0.33
2.	Appearance	8.3±0.88	7.7±0.88	7.6±0.52
3.	Flavor	8.2±0.93	7.7±1.20	7.3±1.15
4.	Texture	8.2±0.76	7.6±1.12	7.2±1.81
5.	Overall Acceptability	8.4±0.51	7.6±1.20	7.2±0.10

Subject selection

Young girls' of Banasthali Vidyapith between 12-18 years of age were selected in this study. Apart from the age, their Hb level was also considered during selection. Background information related to their physical activity, dietary habits etc were obtained from a performa filled by the subjects themselves. The subjects with potentiality were thoroughly interrogated for their background in local language and questioned for detailed information such as about their date of birth, age, class, period of staying (residential or non- residential) in the Banasthali Vidyapith, Rajasthan.

Intervention

Firstly all the selected subjects were categorized into three different groups according to their hemoglobin level: anemic experimental (AE), anemic control (AC) and non-anemic (NA). The subjects of anemic experimental group were supplemented (supervised) for 45 days, while subjects in anemic control and non anemic were taken out from the supplementation. Every subject in the Anemic Experimental group was interfered with two cookies of 25 grams which is 50 grams per girl each day.

DISCUSSIONS AND RESULTS

This research work was conducted for the evaluation of iron based supplementation impact on Hb levels and Physical work capacity (PWC) of adolescent athlete girls' in the Banasthali campus, Rajasthan.

Efficiency assessment

Physical work capacity refers to its ability to do maximum work for a fixed period of time with the normal pulse rate of the individual. To assess their physical work capacity, the steps taken by the subjects when Harvard test was applied and their pulse rate, recovery times (RT) were recorded. As a result, it was found that girls who were anemic obtained lower scores and took longer recovery time than non-anemic girls. The same changes were seen in the data of recovery time (RT). Subjects in the group non anemic (NA) had shorter recovery times than subjects in the group of anemic experiment (AE) and anemic control (AC).

Effect of supplementation on hemoglobin level

Hemoglobin level of the girls was re-evaluated at the completion of supplementation to assess the effectiveness of iron rich cookies. The mean difference in Hb level was observed between the pre-stage and post-stages. An increase, approximately 0.9 g/dl, in the mean Hb level of the anemic experimental (AE) group was found.

In this study, a significant difference was found between the Hb levels of the complement group i.e. the AE group; however there was no difference between the groups that were unaffected, that is, groups NA and AC. Various studies are strongly supporting the effectiveness of iron supplementation, but all of them were based on medicinal iron. Whereas a study carried out by Kowsalya and Shimpray (2008) has supported food-based supplementation. In this study supplementation of 35 grams of fresh Lotus stem were done as the source of iron that was equivalent to 14.5 mg of iron. Satisfactory results were obtained in relation to its nutritive value and hematological values.

Table 3- Hemoglobin level of subjects of three study groups at pre and post intervention stages

Selected Groups	**Hemoglobin level (mean ± SD)**	
	Pre intervention	**Post intervention**
Non- Anemic	13.69±0.58	13.15±0.05
Anemic Control	10.91±0.76	10.89±0.56
Anemic Experiment	10.87±0.49	11.20±0.44

Impact of supplementation on physical work capacity

After the collection of post intervention data in reference to Hb level of girls, source material on physical work capacity were also collected. Same procedures were applied which was used at pre intervention data collection to measure the steps taken and recovery time taken by girls. An enhancement in steps taken by the girls of anemic experimental group was found. Other difference was significant while no significant change was observed in the AC group due to not supplementing this group. There has been no significant changes took place in pre and post intervention stage of non anemic group. The study done by Sen and Kanani (2009) concludes a progression in steps taken by girls and an improvement in their recovery time after the supplementation of IFA (Iron-Folic Acid) tablets. Although in this present study there was no significant changes has been seen in recovery time of any group. There has been seen positive difference in mean values of anemic experimental group between pre and post stages nevertheless the difference was not significant. One of the reasons for showing no significance may be short duration of supplementation was for 45 days only.

Table 4 – Number of steps taken by subjects of selected group at pre and post intervention stages.

Selected Groups	**Pre intervention stage (mean ± SD)**	**Post intervention stage (mean ± SD)**
Non-anemic	285.66±28.75	280.75±39.44
Anemic control	237.16±26.01	227.00±38.91
Anemic experimental	238.33±17.34	249.00±20.08

Table 5- Recovery Time of subjects of the selected groups at pre and post intervention stages.

Selected Groups	**Pre intervention stage (mean ± SD)**	**Post intervention stage (mean ± SD)**
Non-anemic	20.45±4.96	21.08±8.75
Anemic control	25.41±4.29	26.95±7.12
Anemic experimental	24.70±6.97	21.66±6.71

CONCLUSION

Supplementation of Iron-based cookies had shown significant results in increasing the physical performance of adolescent girls. A very modestly increased hemoglobin level indicates that prolonged supplementation may increase Hb levels in female athletes at least 120 days. Iron-based supplementation also showed reduced time for recovery after physical work in young girl athletes. Iron-rich cookies can also be beneficial for anemic people. By increasing iron intake in the diet, the increasing rate of sports anemia can be controlled.

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INDIVIDUALIZED EFFECT AND COMPARED EFFECT OF VARIOUS MUSCLE SPECIFIC RESISTANCE TRAINING ON SELECTED PHYSICAL FITNESS VARIABLES AMONG INTER-COLLEGIATE HOCKEY PLAYERS

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ABSTRACT

Resistance training is a form of exercise for the development of strength and size of skeletal muscles. Resistance training, also known as weight training or strength training, is for everyone. According to the American Sports Medicine Institute (ASMI) resistance training is a "specialized method of conditioning designed to increase muscle strength, muscle endurance, and muscle power". Resistance training can be performed in a variety of ways; with resistance machines, free-weights (dumbbells and barbells), rubber tubing, or own body weight, as in doing pushups, squats or abdominal crunches. The study was to find out the individualized effect and compared effect of various muscle specific resistance training on selected physical fitness variables among inter-collegiate hockey players. For this purpose sixty intercollegiate hockey players were selected from participants of district level inter-collegiate tournament. The subject's age ranged from 18 to 25 years and was selected. The subjects were divided into two equal groups of thirty each. Group-I underwent Various Muscle Specific Resistance Training Group (VMSRTG), Group – II acted as control group. The duration of the training period was restricted to twelve weeks and the number of sessions per week was confined to three. The data obtained from all the groups before and after the experimental period were statistically analyzed by dependent't' test to find out the significant improvement between pre and post test means of all groups. Analysis of Co-Variance (ANCOVA) was applied to determine whether the programmes of training produced significant improvements in selected variables after twelve weeks of training. After twelve weeks of various muscle specific resistances training the experimental group showed significant improvement on the selected physical fitness variables.

Keywords: Muscular Strength and Body composition

INTRODUCTION

Resistance training is a form of exercise for the development of strength and size of skeletal muscles. Resistance training, also known as weight training or strength training, is for everyone. According to the American Sports Medicine Institute (ASMI) resistance training is a "specialized method of conditioning designed to increase muscle strength, muscle endurance, and muscle power". Resistance training can be performed in a variety of ways; with resistance machines, free-weights (dumbbells and barbells), rubber tubing, or own body weight, as in doing pushups, squats or abdominal crunches.

METHOD

The present study was to find out the individualized effect and compared effect of various muscle specific resistances training on selected physical fitness and physiological variables among inter-collegiate hockey players. The study was formulated as a true random group design, consisting of a pre test and post test. The subjects (n=60) were randomly assigned to two equal groups of inter-collegiate hockey players. The groups were assigned as Experimental Groups and control group respectively. Pre tests were conducted for all the subjects on selected muscular strength, and body composition. The experimental groups participated in their specific resistance training.

Training procedure

The experimental groups participated in their specific resistance training. The collected data were statistically analysed with dependent‘ t’ test to find out the significant improvement between pre and post-test means of all groups. Analysis of Co-Variance (ANCOVA) was applied to determine whether the programmes of training produced significant improvements in selected variables after twelve weeks of training.

RESULT AND DISCUSSION

Table –1, Significance of Mean Gains / Losses between Pre and Post-test of Various Muscle Specific Resistance Training Group (VMSRTG) and Control Group on selected Physical Fitness Variables Among Inter-Collegiate Hockey Players on Muscular Strength

S.No	Variables	Pre test mean ±SD	Post test mean ± SD	M. D	SEM	‘t’-ratio
1	Muscular Strength(Resistance Training Group)	30.93 ±2.95	36.10 ±3.10	5.17	0.36	14.39*
2	Muscular Strength (Control Group)	29.93 ±3.14	30.60 ±3.38	0.67	0.33	2.03

***Significant at 0.05 level. Table Value = 2.05**

Results on Muscular Strength

An examination of table 1 indicates that the obtained paired‘t’ ratio for Muscular Strength of experimental group was 14.39. The obtained paired ‘t’ratio on Muscular Strength was found to be greater than the required table value of 2.05at 0.05 level of significance for 19 degrees of freedom. So it was found to be significant. The obtained paired‘t’ratio for Muscular Strength of control group was 2.03. The obtained paired‘t’ratio on Muscular Strength was not found to be greater than the required table value of 2.05 at 0.05 level of significance for 19 degrees of freedom. So it was not found to be statistically significant.

Table – 2, Computation of Analysis of Variance of Initial and Final Means on selected Physical Fitness Variables on Muscular Strength

Variables		Sources	SS	DF	MS	F-ratio
Muscular Strength	Initial Means	Between sets	15.00	1	15.00	1.62
		Within sets	537.73	58	9.27	
	Final Means	Between sets	453.75	1	453.75	43.15*
		Within sets	609.90	58	10.52	

***significant at 0.05 level (4.01)**

In the initial data analysis, F-test was applied to test initial and final means between the group of Various Muscle Specific Resistance Training Group (VMSRTG) and Control Group (CG) on selected physical fitness variable muscular strength. The F-value needed for significance for DF 1, 58 is at 0.05 levels is 4.01.The obtained F-value (table 2) for the initial means on selected physical fitness variable muscular strength was 1.62 are not significant. The F-values observed on the above said variables are found to be non significant. Since, they have failed to reach the required critical value of 4.01 for df 1, 58, it is concluded that the mean difference between the VMSRTG and CG on the variables used in this study before the treatment is statistically non significant.The observed F-Value for the final means muscular strength was 43.15. These values are compared to the critical value at significant level, and it is found that the observed F-Values on final means of muscular strength are greater than the significant level. Therefore it is concluded that the mean difference between the VMSRTG and CG on final means of the variables are statistically significant.

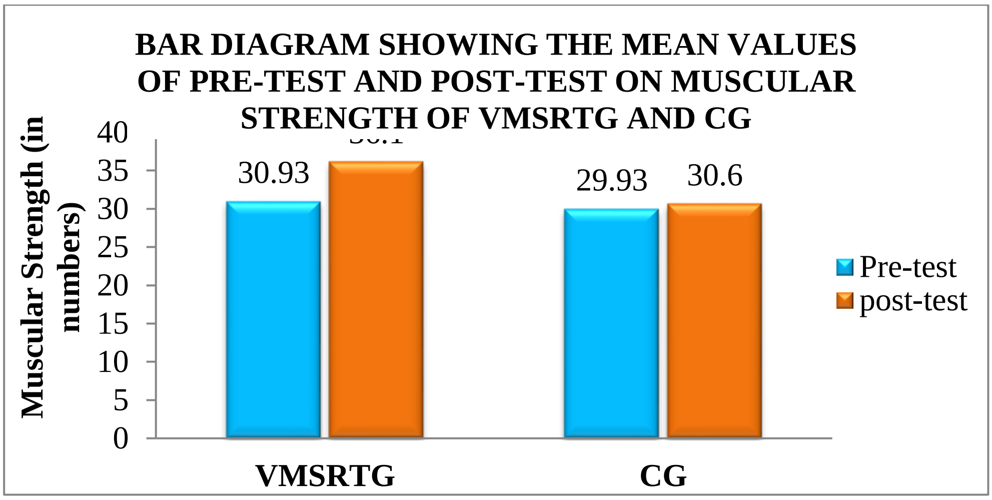


Table –3, Analysis of Covariance on Muscular Strength

Sources	**SS**	**DF**	**MS**	**F-ratio**
Between sets	311.93	1	311.93	90.41*
Within sets	196.65	57	3.45	

***significant at 0.05 level (4.01)**

The table 3 reveals that the obtained ‘f’ value was 90.41. To be significant at 0.05 level for degree of freedom 1, 57, the required critical value was 4.01. Hence, observed ‘f’ value (90.41) was found as higher than the table value (4.01), it was inferred that the adjusted mean difference existing between the VMSRTG and CG on muscular strength was statistically significant.

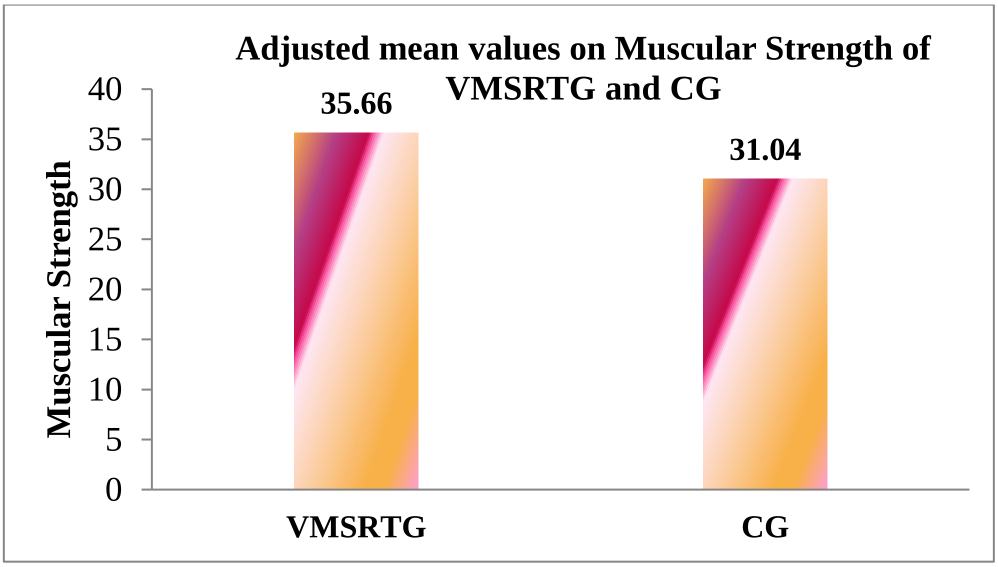


Table –4

Significance of Mean Gains / Losses between Pre and Post test of Various Muscle Specific Resistance Training Group (VMSRTG) and Control Group on selected Physical Fitness Variables among Inter-Collegiate Hockey Players

S.No	**Variables**	**Pre test mean ±SD**	**Post test mean ± SD**	**M. D**	**SEM**	**‘t’-ratio**
1	Body composition (Resistance Training Group)	9.76 ±0.52	9.11 ±0.59	0.66	0.11	6.24*
2	Body composition (Control Group)	9.77 ±0.51	9.65 ±0.39	0.12	0.06	1.95

***Significant at 0.05 level. Table Value = 2.05**

Results on Body Composition

An examination of table 4 indicates that the obtained paired ‘t’ ratio for Body composition of experimental group was 6.24. The obtained paired ‘t’ ratio on Body composition was found to be greater than the required table value of 2.05at 0.05 level of significance for 19 degrees of freedom. So it was found to be significant. The obtained paired ‘t’ratio for Body composition of control group was 1.95. The obtained paired ‘t’ ratio on Body composition was not found to be greater than the required table value of 2.05 at 0.05 level of significance for 19 degrees of freedom. So it was not found to be statistically significant.

Table - 5

Computation of Analysis of Variance of Initial and Final Means on selected Physical Fitness Variables on Body Composition

Variables		Sources	SS	DF	MS	F-ratio
Body Composition	Initial Means	Between sets	0.00	1	0.00	0.01
		Within sets	15.55	58	0.27	
	Final Means	Between sets	4.43	1	4.43	17.57*
		Within sets	14.61	58	0.25	

***significant at 0.05 level (4.01)**

In the initial data analysis, F-test was applied to test initial and final means between the group of Various Muscle Specific Resistance Training Group (VMSRTG) and Control Group (CG) on selected physical fitness variables namely body composition. The F-value needed for significance for DF 1, 58 is at 0.05 levels is 4.01.The obtained F-value (table 5) for the initial means on selected physical fitness variable body composition was 0.01 are not significant. The F-values observed on the above said variable are found to be non significant. Since, they have failed to reach the required critical value of 4.01 for df 1, 58, it is concluded that the mean difference between the VMSRTG and CG on the variables used in this study before the treatment is statistically non significant. The observed F-Value for the final means body composition was 17.57. These values are compared to the critical value at significant level, and it is found that the observed F-Values on final means of body composition are greater than the significant level. Therefore it is concluded that the mean difference between the VMSRTG and CG on final means of the variables are statistically significant.

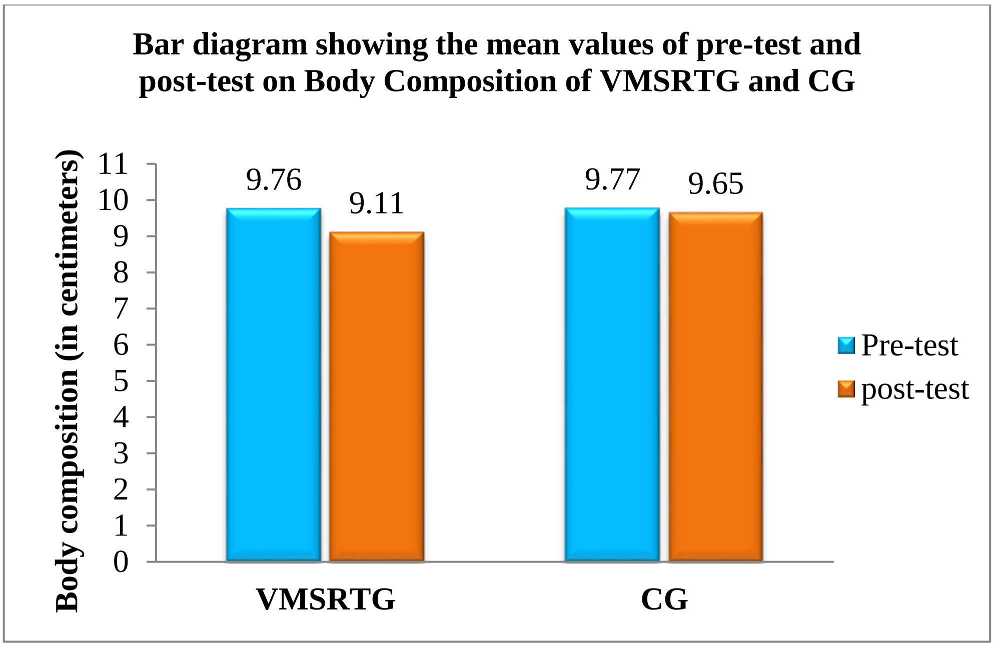
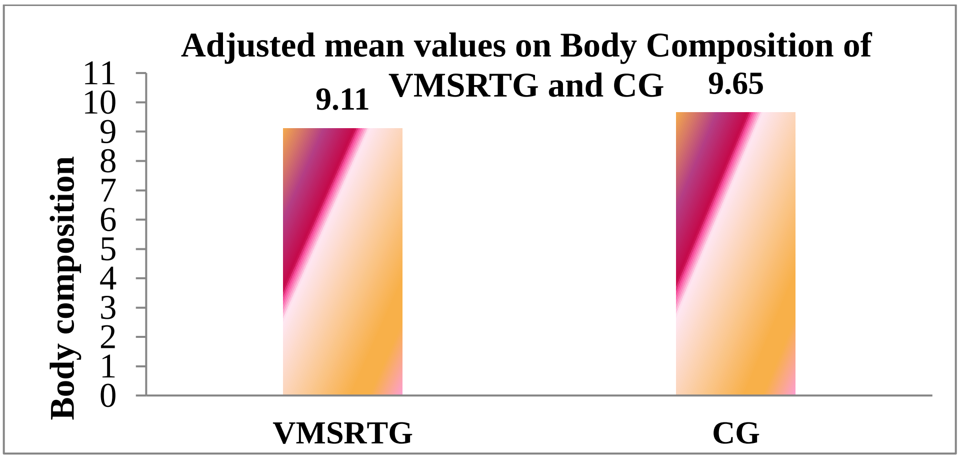


Table –6, Analysis of Covariance on Body Composition

Sources	SS	DF	MS	F-ratio
Between sets	4.34	1	4.34	24.86*
Within sets	9.95	57	0.17	

***significant at 0.05 level (4.01)**

The table 6 reveals that the obtained 'f' value was 24.86. To be significant at 0.05 level for degree of freedom 1, 57, the required critical value was 4.01. Hence, observed 'f' value (24.86) was found as higher than the table value (4.01), it was inferred that the adjusted mean difference existing between the VMSRTG and CG on body composition was statistically significant.



CONCLUSION

1. It was concluded that the experimental group made a significant changes on selected physical fitness variables namely muscular strength and body composition from base line to post test.
2. The control group did not show any significant difference in this study.

Recommendations

1. From the present study, it may be concluded that the improvement on selected physical fitness variables (muscular strength, body composition). Hence, Trainers and Physical Educators could adopt such training to improve specific resistance training group among their athletes.
2. A similar study may be conducted by selecting on physiological and other performance factors as criterion variables.
3. A similar study may be attempted by selecting the school level football players as subjects.
4. A similar study may be conducted on female as subject.
5. A similar study may be undertaken to analyze the hematological factors.

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BUILDING A DYNAMICALLY HEALTHY NATION BASED ON ALL PERVADING CULTURE OF PHYSICAL EDUCATION

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Abstract

The aim of this research expedition was investigate the facts whether there is a proper physical education program and the status of physical fitness of student in the school of vidarbha. For this (945) student of the age 11-15 were tested. There were (405) girls, and (540) boys were selected. In addition all schools of Amravati district were surveyed with the view to find out; the physical education periods allotted in their exiting time tables, number of physical education teachers that they had, the facilities for physical education program that they had, and the attitudes towards the physical education program of non physical education teacher and general staff of those school. For testing the students fitness status-"The Asian Health Related Youth fitness test (By, Yashiro Hatano-Japan) was used as a bench mark. This test consisted of 5 components. The results of each of the categories were noted down on an individual fitness cards for each students. "Survey questionnaire forms" were used to collect data from; students, teachers & parents. Obtained data was than compared with Asian countries norms. It was found that, Vidarbha region students physical Fitness score was the lowest but the attitude of the students towards physical education program was of enthusiastic, even without knowing intimate relationship fitness with health. The parents were made aware by their involvement in checking the fitness card of the children. They were pleasantly awakened to the physical Education program. The response of the general teachers was very good & pointed that "The physical Education Program should become embedded into education policy". Need it to be said that the absence of comprehensive program on health is an equal to unfit & sick population, which is not able to compete on the world stage. The recommendation is that the NCERT should re-evaluate the exiting educational policy & by amalgamating it will the dynamic & up to date 1978 UNESCO international Charter of physical education & sports bring forth an Indian National Act.

Key Words:-physical fitness, physical education program, endurance, flexibility, strength, fat, NCERT. UNESCO National Act, (AYFT) Asian youth Fitness Test.

INTRODUCTION

Healthy child is a sign of healthy nation. Physical activity and fitness among children improve the quality of life. Regular physical activity helps to maintain the health and quality of life for people of all age. Physical activity is one of many factors that influence the growth and development of children and adolescent. Benefits of regular physical activity are generally considered on the basis of cardio-respiratory improvement of benefits in other health related component of physical fitness including muscular strength and endurance, flexibility and body composition status (Hill, 1995).

Physical activity contributes to weight gain and relative risk for coronary heart disease. This has been associated with subsequent morbidity and mortality later in life. Evidence suggests that the exercise patterns of adults are related to their physical activity as children (Kerner et al. 2001) Physical fitness is to the human body what fine-tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us for better look, pleasant feel and do our best. More specifically, it is; "The ability to perform daily task vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergency demands. It is the ability to endure, to bear up, to with stand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for health and well-being." "Fitness is that state which characterizes the degree to which the person is able to function. Fitness is an individual matter. It implies the ability of each person to live most effectively with his potential. Ability to function depends upon physical, mental, emotional and social components of fitness, all of which are related to each other and mutually interdependent" (Ajmer Singh, et, al.2003). Physical fitness refers to the organic capacity of individual to perform the normal. Task of daily living without undue tiredness or fatigue having reserves of strength and energy available to meet satisfactorily any emergency demands suddenly placed up on him." (Nixon.) Regular physical activity also helps to maintain the functional independence of children and enhances the quality of life for people of all ages, (Pate et, al. (1995) described regular physical activity is especially important for people who have joint or bone problems and has been shown to improve muscle function, cardiovascular function, and physical performance. For people who are active, even small increases in physical activity are associated with measurable health benefits. Current and past research has indicated a rise in negative attitudes towards physical activity In relation to increased age (Prochaska. Et, al. 2003). Suffice it to say that the above-mentioned factors coupled with unhealthy dietary habits and the absence of physical education program in the curriculum from the primary levels up in the schools people continue to remain unhealthy in their lives. This disastrous situation would have never occurred, if there were a culture of awareness of physical education and fitness. Even in 1962, the (NCERT) National council of education Research and Training advocated the physical education program from very grass root level of education. But miraculously its recommendations of implementations of a physical fitness program didn't last long enough. They somehow gradually disappeared from the school curricula. It was observed from the survey of the school curriculum and program in Vidarbha that although the periods time is allotted for physical education are shown in the school timetables, in reality, but actual students are deprived from the participation in physical education program. The times allocated for physical education were used instead for teaching other subjects like science and mathematics. Though the fitness is considered to be the prime requisite of every individual, the participation in fitness activities not permitted in schools. Students participate in the unsupervised sports activities on their own in the lunch hour or in their off periods, play is a natural instinct in the children. These activities are not supervised by any teacher, because as the school are not provided enough physical education teachers in the schools in the proportion to the number of students and in many school there are no physical education teachers at all. This is the known fact. Therefore the purpose of the study was to investigate the physical education program run in the school of Vidarbha region. A study was conducted to find out the status of physical fitness and its awareness amongst the school children. This research was guided by the questions; 1) whether such program exists in reality? 2) If it does exist and is 'visible' in schools, then is it implemented? 3) If it is implemented to what extent it is implemented? 4) How much the students are aware about it & benefit from it? 5) Are the parents also aware of this program? 6) Whether are not the program which was run in Indian schools was comparable to the AYFT? 7) In order to raise the awareness of educators about the present state of physical education. In Indian schools and in our neighboring Asian schools? 8) Also study to stimulate designs of physical education curriculum. 9) To demonstrate the causes declining the healthy fitness status of students and people in general.

METHOD

Subjects:-The subjects of the physical fitness and awareness study were randomly chosen from Amravati city of Vidarbha region which is located in the north east corner of Maharashtra State of India. There were two schools randomly selected from Amravati for this study. One Government Girls High School (GGH) and the other was a privately school called Mahamana Malviya Mahavidyalaya (MMV).

A total of 405 girls were recruited from (GGH) and 540 boys' were selected from privately funded school called Mahamana Malviya Vidyalaya (MMV). There were 135 girls in each of the groups at 11, 12, and 13 years making total 405. There were 540 boys all together 180 each from the age groups of 13, 14 and 15 years. The bench mark test was Asian Youth Fitness Test, "All the students from both schools were collectively explained the purpose and methodology of the research that they were participating in. Each of them was given the consent from and was assisted in filling those properly; of course they also filled out the questionnaire forms in the course of the research.

Instrumentation :The component of AYFT were endurance run 1800 meters for children of ages 10 & 11 years; 1,000 meters for girls of ages 12 through 17 years and 1800, meters for boy's of 12 through 17 years. Sit-ups in 60 seconds for abdomen strength, pull-ups (modified pull ups for girls of all ages and boys of ages of 10 & 11 years) for shoulder strength. Sit & reach test of flexibility at sitting position. And skin folds (sum of triceps and calf) for fat percentage. Together with the fitness test, it was planned that a questionnaire test survey on aimed at determining the attitude of the youth towards sports participation and physical activities was also conducted.

Procedures: The participants of this study were come from two different high schools. The girls were from the Government Girls High School (GGH) from three age groups and boys were selected from similar class structure of the society, there by cancelling out the disparity factors. There were 540 boys from Mahamana Malviyavidyalaya from the three age groups13, 14, 15 years. 30 boys were tested each day (according to the AYFT) Completing 180 boys were tested in 18 days. Grouping them together on 19 days for filling out the attitudinal survey forms. For fitness record and for systematic data collection, the physical fitness card was made (accordingly). Having filled these cards with all the details of their physical fitness, students were asked to take their home to be sited and signed by their parents followed by students brought back those cards for submitting to scholar.

In turn the data, again gave those cards back to the students to keep as a record of their physical fitness and participation in this study. This whole exercise was designed for the purpose of making parents aware of the status of their children's physical fitness.Table 1: School Amravati District Where P. E. Program conducted.

Types of Schools & No	**Sections Per Classes**	**Period Allotted (Per week) 1 MPT)**	**% of Timing M/E**	**% of Supervised/ Non Supervised**	**Activities Free Play/MPT**	**% of Competition Intra/ Extra**	**% of Facilities Play Fields & Equipments**
ZP 1085	2	5	M- 100 E- 100	/	95 F.P. 5 MPT	85-NC 10- IN 5- EX	25-PF 5- EQ
Municipal C/C 128	2	5	M- 50 E- 50	S-5 NS- 95	95 F.P. 5-MPT	90- NC 10-In 1-Ex	18-Pf 5- EQ
Private Aided 80	03-Apr	5	M- 100 E-100	S-50 NS- 50	80 F. P 20 MPT	90- NC 10- In 1-EX	50-PF 50- EQ
Private Non Aided 15	1/2		M- 100 E- 100	S- 50 NS -50	100F.P. Minor Games	90-NC 10-In 1-EX	34-PF 25- EQ

Source of data: Actual survey of school of Amravati district

Abbreviations- MPT(Mass P.T.) IN(Intramural) EX(Extramural) M(Morning) E(Evening) S(Supervised) NS (Non supervised) EQ(Equipment) PF(Play Field)

Table indicates that in all school's time-table showing HPER-SD periods for each class. In morning or in evening. Maximum are having non–supervise classes for want of special teachers. In private school some are appointing special teachers and conduct supervised program. Most of the schools having mass physical activity or free play for the students. Very few school conducting intramural, extramural & facilities of physical education are not sufficient in the schools.

RESULT AND DISCUSSION

Statistical Analysis (Mean & standard deviation and percentage calculated for this study) The data of physical Fitness tests were collected. And statistical analysis was made. Means and S.D. of various fitness scores were calculated which are given in the following table no2. Display the age wise classification & fitness level of Boys and girls. The Five test items were taken off. The model of AYFT. It summarizes the descriptive data of mean + SD for male and female students, from two different school. Girls were from exclusively from girl's school & boys were exclusively from boy's school

Table No.2. Mean +sds' of Boys & girls group of physical fitness components.

Items	Boys	Girls

	13 yrs. M. SD	14 yrs.M. SD	15 yrs.M. SD	11yrs.M. SD	12yrs.M. SD	13yrs.M. SD
Endurance Run(Seconds)	487.9 +44.9	499.9+ 45.7	480.9+ 43.5	280.9+ 61.9	399.3+ 59.3	377.8+ 57.2
60 Sec. Sit Ups (times)	23.8 +8.8	22.7 + 8.2	20.6 +7.3	20.8 +8.3	19.9 + 8.1	17.7 + 7.9
Pull ups (times)	2.4 +2.2	3.7 + 3.4	4.3 + 4.0	3.7 +3.4	2.9 + 3.5	2.2 + 2.4
Sit& Reach (cm)	8.6 +8.3	6.5 + 7.8	5.9 + 7.0	9.4 +6.7	8.8 + 5.6	9.2 + 6.7
Skin fold thickness total(mm)	15.5 +5.5	15.0 +5.3	16.5 +4.8	17.9 +6.2	18.4 + 7.1	18.6 + 6.9

Source: scores from actual conducted of AYFT

Table 3-4 Display the classification categories were adopted from the AYFT model

Percentages of the fitness of students were derived. It demonstrates percentages of excellent, good, average, and poor in every age group of girls and boys

Table No. 3 The percentage of classification of fitness level of 405 Girls' students of age 11, 12, and 13 year

Age	N	Classification	% of fitness
11 Year	135	Excellent Good Average Poor	14.7 17.8 47.6 19.9
12 Year	135	Excellent Good Average Poor	20.5 17.2 37.4 24.9
13 Year	135	Excellent Good Average Poor	15.5 21.9 40.5 26.4

Table 3 indicates that 11 years girl's students out of 135 students, 14.7% were having excellent physical fitness, 17.8% having well, 47.6% having average & 19.9% having poor.

In 12 Years age group, 20.5% were having excellent, 17.2% having well, 37.4% having average & 24.9% having poor physical fitness.

In 13 Years age group, 15.5% were having excellent, 21.9% were having good, 40.5% having average & 26.4% having poor physical fitness.

Table No. 4

The percentage of classification of fitness level of 450 boys' students of age 13,14 and 15 Yr.

Age	N	Classification	% of fitness
13 Year	180	Excellent	17.5
		Good	28.7
		Average	36.0
		Poor	27.8
14 Year	180	Excellent	25.0
		Good	27.7
		Average	30.7
		Poor	16.6
15 Year	180	Excellent	19.5
		Good	19.6
		Average	34.3
		Poor	36.6

Table 4 indicates that 13 year boys' students out of 180 students 17.5% were having excellent physical fitness, 28.7% were having well, 36% were having average & 27.8% were having poor physical fitness.

In 14 years age group, 25% were having excellent, 27.7% were having good, 30.7% were having average & 30.7% were having poor physical fitness.

In 15 years age group, 16.6% were having excellent, 19.5% were having good, 19.6% were having average & 34.3% were having poor physical fitness.

This shows that Vidarbha students boys and girls were not having above 50% good physical fitness, maximum were having below normal physical fitness.

The result indicated that the amount of students who fell into average category and for stronger than the other categories. There were considerable in all age groups at both whom fell in to the 'poor' category in all age groups of both sexes. What was surprising to find that in mature age groups of both sexes,13 Year girls & 15 year boys, the percentages of poor performance was alarmingly high (indicating in table 3 &4).

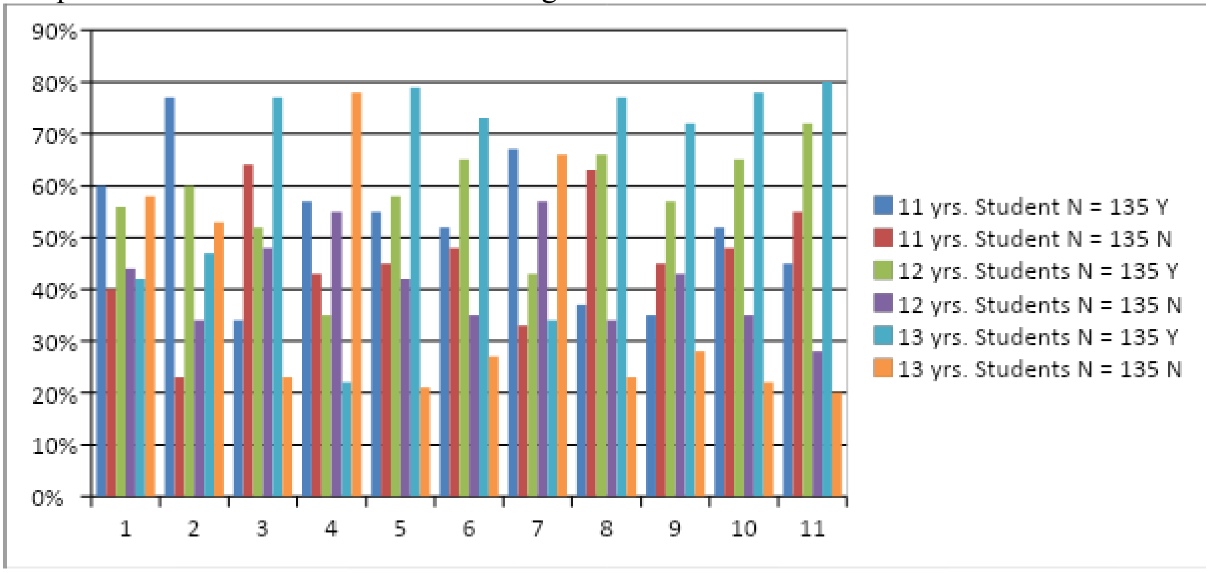
Table No. 5 - Girl attitude towards P. E. Program

Sr. No.	Questions	11 yrs. Student N = 135		12 yrs. Students N = 135		13 yrs Students. N = 135	
		Y	N	Y	N	Y	N
1	Uncomfortable	60%	40%	56%	44%	42%	58%
2	To difficult	77%	23%	60%	34%	47%	53%
3	Enjoyable	34%	64%	52%	48%	77%	23%
4	Boring	57%	43%	35%	55%	22%	78%
5	Friendship	55%	45%	58%	42%	79%	21%
6	Physical change	52%	48%	65%	35%	73%	27%

7	Competition no tournaments	67%	33%	43%	57%	34%	66%
8	Competition	37%	63%	66%	34%	77%	23%
9	Training	35%	45%	57%	43%	72%	28%
10	Health & fitness	52%	48%	65%	35%	78%	22%
11	Relaxation	45%	55%	72%	28%	80%	20%

Source:- Score of actual questionnaire filled up by the 405 Girls students

Graph of Girl's attitude towards P. E. Program



According to Table 5 & above graph shown the attitude of girls (students) towards exercise. 11 Yr olds thought physical education to be not pleasant judging by the first four categories. The 55% said it helped with giving & maintaining friendship. 52% acknowledged that physical education brings about positive physical changes in their body. Quite a good majority thought that physical education does not lead to one's competitiveness. 52-55% said it was good as training & good practical health & overall fitness. Very few thought it was relaxing.

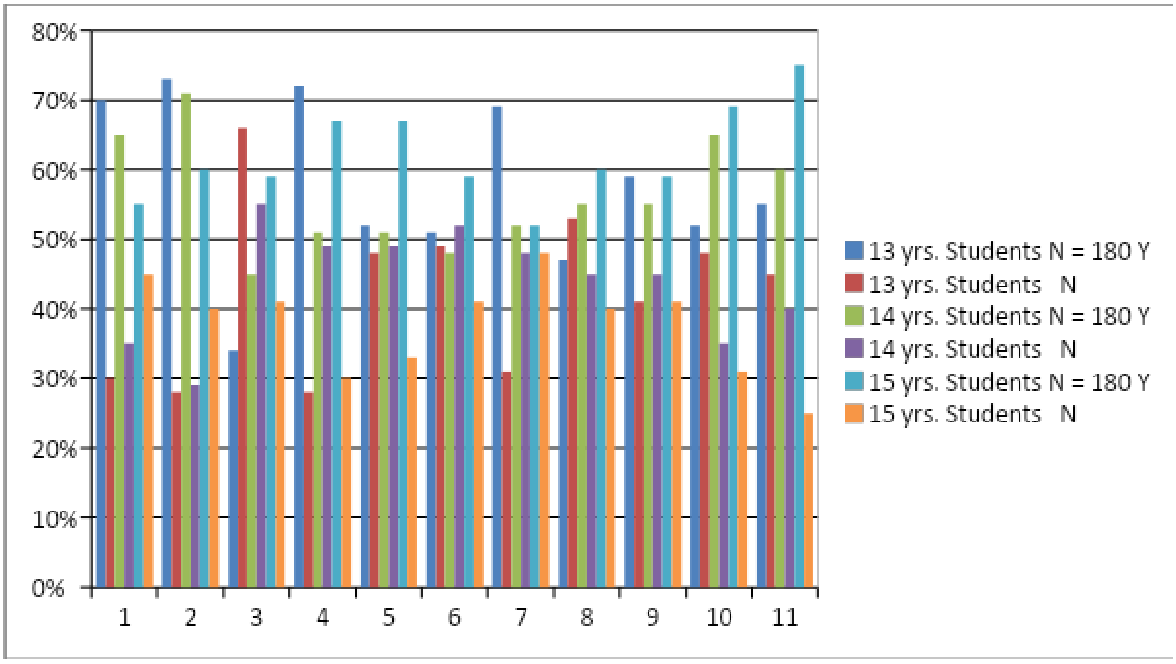
12 & 13 years old girls showed marked improvement in their attitudes in category 2 (Enjoyable), positive improvement in 4th 'boring' category, a hoping 55% in 12 yr & 78% in 13 Yrs said it was not so. The fifth 'Friendship' category showed very big jump, the 13 yr old girls gave 78% and the 12 year olds gave 58% positive response in this category. Physical change category got an increasingly positive response in 12 Yrs and the 13 Yrs olds gave 73% positive acknowledgement. Health & fitness & Relaxation categories gave substantial majority percentages of 78 & 80% in age 13 yrs. Group. Also can be seen from the table, as the age increases, also the liking of physical education increases, it becomes more enjoyable, relaxing, fitness giving and conducive for friendship.

Table No 6. Boy's Attitude towards P. E. Program

Sr. No.	Questions Participation	13 yrs. Students N= 180 Yes	No	14 yrs. Students N = 180 Yes	No	15 yrs. Students N = 180 Yes	No
1	Uncomfortable	70%	30%	65%	35%	55%	45%
2	To difficult	73%	28%	71%	29%	60%	40%
3	Enjoyable	34%	66%	45%	55%	59%	41%
4	Boring	72%	28%	51%	49%	67%	30%
5	Friendship making	52%	48%	51%	49%	67%	33%
6	Physical change	51%	49%	48%	52%	59%	41%
7	Competition no turn	69%	31%	52%	48%	52%	48%
8	Competition and turn	47%	53%	55%	45%	60%	40%
9	Training	59%	41%	55%	45%	59%	41%
10	Health & fitness	52%	48%	65%	35%	69%	31%
11	Relaxation	55%	45%	60%	40%	75%	25%

Source:- Score of actual questionnaire filled up by the 450 Boys students

Graph of Boy's Attitude towards PE



According to table 6 & above graph shown over all negativity towards sports increases in the boys as the age advances. The first four categories had quite a substantial negative response from all the age groups. Sport is contributing to 'friendship' was a little into the positive.

Boarder line response for the 6th 'practical change' category gave little encouragement. Categories 7-9 had a very lack luster response & 10-11 fitness & relaxation was surprisingly a good majority. Overall percentages for the boys were very average and border line.

Table No. 7

Boys and girls Participation in sports

Sr. No.	Game		Girls			Boys	
		11 Yr	12 Yr	13 Yr	13 Yr	14 Yr	15 Yr
1	Kabaddi	27%	50%	25%	62%	65%	62%
2	Volley Ball	41%	67%	65%	60%	62%	51%
3	Cricket	--	--	--	72%	80%	88%
4	Athletics	32%	20%	25%	20%	25%	25%
5	Ball Badminton	47%	50%	30%	20%	30%	35%
6	Basket Ball	10%	22%	40%	32%	32%	38%
7	Foot Ball	--	--	--	35%	52%	40%

Above table no 7 indicating that the Kabaddi is a hit with boys as well as with younger, 12 yr old girls. But as the girls progress towards the puberty age, their interest drops in vigorous game. Volley ball is popular with the girls & boys alike, except that the older the boys grow, their interest seems to drop. Cricket is a boys' domain, girls seem to only like to watch it. Athletics is liked equally by an average of 35% by both sexes. Ball Badminton is well liked by the girls. The elder girls & the boys seem equally interested in this game by about. Basket Ball is kind of similarly proportional in boys and girls. We say it, Foot ball is boys' domain.

CONCLUSION

The purpose of this study was to investigate the physical education program run in the school of Vidarbha region. Upon investigation, we found no signs of systematic implementation of a physical education program in any of the schools. There was no clear mention of the physical education program in the curriculum of any one the schools. This distressing finding was in spite of the clear recommendations of the NCERT to have a physical education program in school

Healthy life style begins at an early age. Some studies show that the attitude towards physical education, activity and fitness are established by eight years of age. This creates the importance of daily Physical Activity beginning in the early years and continuing for a life time not surprisingly, the absence of the physical education program in the lives of these school children reflected on the poorly on the status fitness of the children. According to American College of Sports Medicine, 40% of children aged 5-8 years have signs of elevated blood pressure, obesity and elevated cholesterol & that only less than 50% of American child have adequate Cardio-respiratory endurance. [Carolyn Eurr-1990] Suffice it to say that India needs a comprehensive physical education program

& its implementation should be strictly followed. We should perhaps learn from our neighbor, Thailand, who has a National Education Act, wherein physical education policy is clearly stated in detail & it is implemented meticulously in each and every school (Bangkok 2001. ONEC)

Off course, the absence of the physical education policy does not stop the children from playing. The children do indeed play, but totally unsupervised, unguided, un-aided, without any method & instrumentations (Like ball, bat, net etc.) Also, there is a need to mention here that there are a couple of periods allocated per week, for physical education, which are far little & too far-few in between, in spite of this, even those periods are scheduled off for other academic subjects, because of very low consideration for the physical education & children only get to play, on their own volition, in the lunch break & if they have extra time, then, before & after school hours. Needless to say, this so called "playing" of children is only "playing around" by the children and not at all a physical education program of any value. This kind of monk eying around is done by the children even at home. They do so, owing to natural instinct.

The children really look forward to a physical education class (period) in the school. They truly want to participate in a systematic physical education period which is surprised & guided by a physical education teacher. They want to participate in such physical education periods with their classmates. Children expect the physical education engagement in earnest. In Hong Kong, china, Hong Kong Baptist University conducted a survey of "Student's Expectations of physical Education". Sin Yen Cheung et.al. Conducted this survey on 6377 students from 17 school. There were 3146 male & 3204 female student. The student hoped that the physical education periods should be about 120 min. Period there, so, three periods were to be combined in one, thus making 2 periods of 120 min per week, from the existing six periods of 40 min. Duration per day. The students expected that the physical education subject examination include 100% skill with half subjective & half objective criteria and would be held at the end of each term. Students further said that the objective of physical education was not just becoming physically fit, but physical education subject would help them getting fun, occupying leisure time and improving self confidence. They also pointed out that: sufficient space, changing rooms, adequate equipment, comfortable environment & tidiness of the equipment and facilities of equipment. 44thichper-SDWORLD CONFERENCE. Taiwan]

Due to the above situation, the status of physical fitness in India was found to be very low amongst the students. As mentioned earlier, the students play on their own. But that partely activity is nowhere near to a proper physical education program. Students did not know what physical education was and further they had no clue about the co-relation in between physical education & physical education & health. Students were pleasantly surprised to find out the various components of physical education. The students were given following tests. 1) Flexibility, 2) Agility, 3) Endurance, 4) Strength, 5) Fat Percentage; Suffice it to say that it was their first introduction to the physical education. This is surprisingly alarming. Because Cardio respiratory fitness is an important aspect of quality of the life for healthy individuals, as well as risk factor for coronary heart disease. The ability to utilize oxygen during exercise is the basis for this fitness component. Healthy heart can pump great volumes of blood with each beat will have a high level of cardio respiratory fitness. Low level of this fitness is directly related to a higher risk of heart disease. (American Alliance for Health, Physical Education, Recreation and Dance, 1998 (11) 203-228.

To avoid the crippling back problem which totally destroys person's productivity is intimately linked with flexibility. Having good ROM can decrease chances of having low-back problem. Maintaining flexibility is an important consideration in maintaining the healthy spine. This is important in therapeutic exercise. In individuals with low-back problem, the back musculature is often proportionately weaker than the abdominal musculature; in part this might be due to neglect of extensor muscles strength in exercise program. The trunk musculature is often proportionately weaker than the abdominal musculature; in part this might be due to neglect of extensor muscles strength in exercise program. The trunk musculature can work together as a dynamic corset; the lateral abdominal muscles "tie" the flexors and extensors of the spine together and their development is exceedingly important. (Sullivan,Dejulia&Worrell, 1982). Maintenance of good hip joint is essential for healthy spine. (Sinaki, Lutness and Ilstrup, et al (19-89)13 (1) 248-256.

Muscles function can be classified in terms of strength or endurance. Muscles strength is the capacity of the muscles to generate force. It is influenced by the number and types of motor units recruited, muscles size initial length and velocity of contraction. The nervous system and the increased muscle mass are the primary factors account ing for the increase in the strength. Skeletal muscle is more metabolically active than fat the primary result of strength training is an increase in muscle mass, resting metabolic rate is important in the prevention and management of obesity. Regular strength training reduces the risk of joint and muscle injuries which may occur during daily routine life. (Abraham 1977) (12) 1-231-239

Developing muscles brings strength to the body. A proper exercise program helps achieving strength, endurance & good bone density. Increasing bone mass during youth, risk of bone fragility associated with bone loss in later life could be reduced. (Bailley. 1995)

The physical Fitness and Health Cards, which were filled out by the students in this survey, were then sent to their homes for parents viewing. Due to the total lack of "Fitness Culture" in the Indian Society, the parents were found to be totally un-aware about of course, the parents are the representative of the Society at large. The overwhelming response from the parents was of 'pleasant & welcome surprise". They wanted to be involved in this program & fully endorsed their children's participation into the survey & many said, let there be a systematic physical Education program implementation in the school, for the overall benefit of their children.

As per the study of the survey, researcher also had undertaken the survey of general teacher's attitudes towards physical education. Their overwhelmingly response was that "We all need physical Education Program in our lives, and what better place there is than our school ! They further said that; there is no physical Education policy in our system. When we do get such comprehensive policy, we really wish that it would also be implemented meticulously. It is not viewed as an important activity for overall wellbeing of a person. But then, while observing the student's wholehearted response and complete consumption into the physical Education periods we see a wonderful phenomenon unfold. 100% of the students are 100% happy and joyful in the physical education classes. But alas! There are no facilities for physical Education program in most of the schools, there are no physical education teachers, and if some schools have them, they are not enough for schools. As a result there is no supervision of children in the physical education periods. If there is some so-called supervision, there certainly is not conduction of a systematic & cohesive; age wise physical education program implementation from the groups is very scant. Eventually, as the students gradually progress in age, the SPORTS TOTALLY DROP OUT from the lives. Little wonder then, that there is no sports culture in India at all!

This very situation prevailed in almost all of the developing Asian Countries. So, to remedy this problem, they started to conduct systematic research into this area, as a result of which, prepared one bench-mark "Youth Physical Fitness Test," and a test for gauging students attitudes towards sports. BASED UPON THAT RESEARCH SURVEY they certified a set of Norms youth fitness test and developed norms for the youth of their country. As such, the researchers put forth a comprehensive picture of the status of physical fitness & health of their youth, in front of everyone. As a result of this clear exposure of all of their respective countrymen, the health and fitness of every citizen come into sharp focus [YOSHIRO HATANO-1989]. Obviously, these finding impelled all citizens and their policy makers towards making (creating) a comprehensive physical education policy, which will be implemented from the grass roots levels of primary schools.

This very process needs to take place in every country, where there is no culture of physical education. India is of course, included. Hence this research has been very timely & useful.

Need we say it, the physical Fitness & Sport performance is intimately connected to each-other & is inter dependent. Therefore India does not have substantial, mass participation in any sport on national or international level. Indeed compared to its population India has extremely low representation in sports. The high state of physical education would help a person to acquire skills of any profession with relative ease [HINKAKONO-1977].

Suffice it to say that a physically fit person is good & ready to successfully tackle any situation that he/she may find themselves [Wen-Shyong Hwang (1995)]. In concluding it can be said that systematic & meticulous implementation of a physical Fitness Program, from the gross roofs, school level upwards is imperative to achieve the goal of having a healthy Nation, of performers in all sports, on national and international levels. Hence it is concluded that in all the schools the physical program must be implemented and in every school the sufficient physical education teacher should be appionted as per recommendations by Government department of education.

RECOMMENDATION

As all the Asian Countries have made strides in physical Education. India too should have like the one, which is conducted in Vidarbha. Conduct state wise or region wise researches into physical education & health status of school children. And make students, parents & teachers aware of the importance of physical education & fitness program. A committee should be set to synthesize all these recommendations & from that exercise a national Act on physical education to be made. Educational provision should be based on 3 principals: 1) Lifelong physical education for all, 2) Provisions for participation by all segments of society, 3) Continued development of the bodies of knowledge and learning processes. All Educational policies and Acts made so far, should be re-examined and re-evaluated, in order to bring them in step with the needs of the 21st, and all the recommendations' of "the 1978 UNESCO International Charter of physical Education and Sport.

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Impact of COVID-19 on Normal Students Life

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ABSTRACT

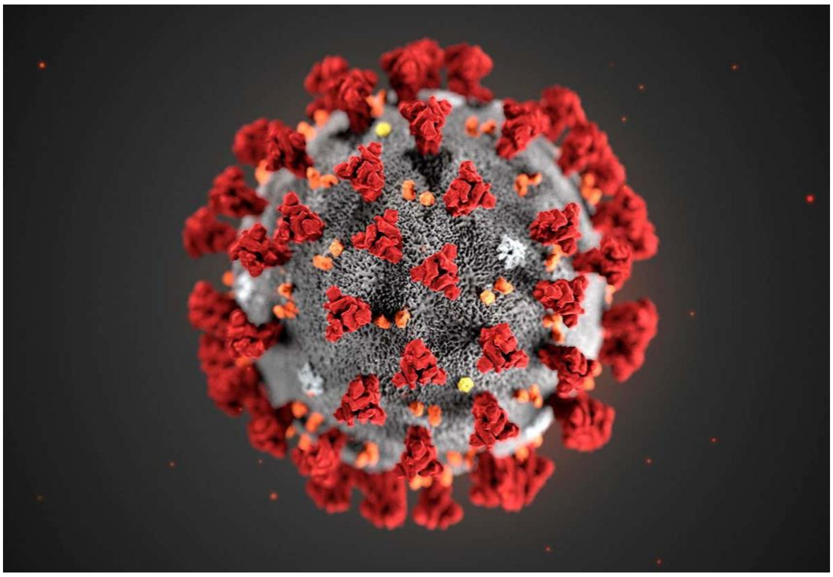
The outbreak of Coronavirus disease 2019 (COVID-19) has created an impact on the entire World. All the educational institutions are closed physically and classes are held online around the globe. Students are facing lot of problems due to present situation, not only education but also fitness level to maintain. This diseases is caused by severe acute respiratory syndrome (SARS) coronavirus 2 (SARS-CoV-2), has thus far killed and infected many people across the globe. This disease is originated from bats. However, COVID-19 has lower severity and mortality than SARS (2002) but is much more transmissive and affects more elderly individuals than youth and more men than women. In response to the rapidly increasing number of publications on the emerging disease, this article attempts to explain the basic overview and the prevention methods to be followed. In this article I've covered the basics about the epidemiology, incubation, diagnosis, treatment, behaviour, Immunity factor and prevention of the disease. The race for Covid vaccine will be very crucial in the upcoming days.

Keywords: Coronavirus, Outbreak, Prevention and Safety, SARS-CoV-2, COVID-19

INTRODUCTION

Covid-19 is also known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) or Novel Coronavirus. The outbreak was first identified in Wuhan, China, in December 2019.The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January 2020, and a pandemic (an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people) on 11 March. A wet market in Wuhan, China, called the Huanan Seafood Wholesale Market, is believed to be the source of COVID-19. All the educational institutions are closed physically and classes are held online around the globe. Students are facing lot of problems due to present situation, not only education but also fitness level to maintain.

Coronaviruses are a large family of viruses that are known to cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).It transmits from human to human affecting the respiratory system of human body which in terms causes difficulty in breathing.

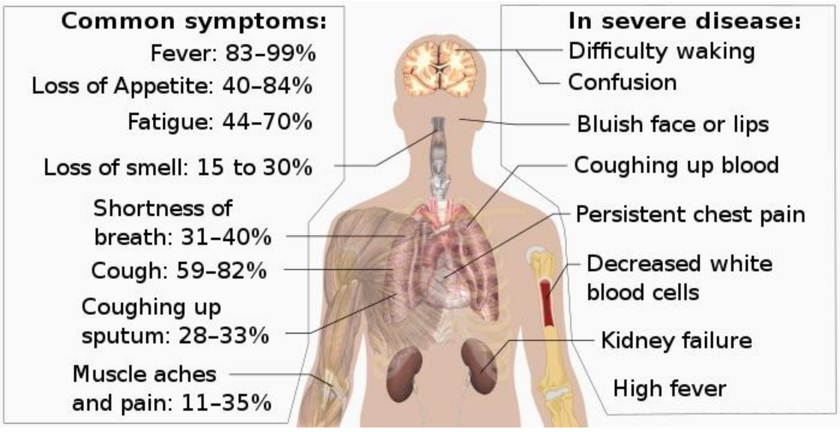


Incubation period:

This is when the virus is establishing itself. Viruses work by getting inside the cells your body is made of and then hijacking them. The coronavirus, officially
Called Sars-CoV-2, can invade your body when you breathe it in (after someone coughs nearby) or you touch a contaminated surface and then your face.
It first infects the cells lining your throat, airways and lungs and turns them into "coronavirus factories" that spew out huge numbers of new viruses that go on to infect yet more cells.
At this early stage, you will not be sick and some people may never develop symptoms.
The incubation period, the time between infection and first symptoms appearing, varies widely, but is five days on average.

Symptoms:

The Symptoms can be developed in 2 ways either Mild symptoms where people can recover without undergoing special medical treatment or Serious Symptoms.



Most common Mild symptoms are:

- Fever
- Dry cough
- Tiredness
- Sore throat

- Aches and pains
- Diarrhoea
- Conjunctivitis
- Headache
- Loss of taste or smell
- A rash on skin, or discolouration of fingers or toes

The patients with mild symptoms can monitor their health at home. The recovery time is 2 weeks for mild patients.

Most common Severe Symptoms are:

- Difficulty breathing
- Shortness of breath
- Chest pain or pressure
- Loss of speech or movement

If any person I having severe symptoms then they must have to seek medical care and consult a doctor. The recovery time is around 3-6 weeks for patients with severe symptoms.

(Generally it takes 5–6 days from when someone is infected with the virus for symptoms to show, however it can take up to 14 days)

Treatment:

As of now there is no vaccine available for the treatment of this newly found Sars-CoV-2.

The measures can be taken such as:

- Self-care

If you feel sick you should rest, drink plenty of fluid, and eat nutritious food. Stay in a separate room from other family members, and use a dedicated bathroom if possible. Clean and disinfect frequently touched surfaces. Take steam and hot showers regularly.

- Medical treatments

If you have mild symptoms and are otherwise healthy, self-isolate and contact your medical provider or a COVID-19 information line for advice.

Seek medical care if you have a fever, a cough, and difficulty breathing.

Anyhow all the medical researchers are working harder to find the vaccine for this disease.

Prevention:

1. Wash your hands often. Use soap and water, or an alcohol-based sanitizer.

Maintain Social distancing (Maintain a safe distance from anyone who is coughing or sneezing).

2. Wear a mask when physical distancing is not possible.
3. Avoid touching your eyes, nose or mouth.
4. Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze.
5. Stay home if you feel unwell.
6. If you have a fever, cough and difficulty breathing, seek medical attention

COVID 19 CORONAVIRUS DISEASE
STOP THE SPREAD OF GERMS
Help prevent the spread of respiratory diseases like COVID-19.
Avoid close contact with people who are sick.
Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
Avoid touching your eyes, nose, and mouth.
Clean and disinfect frequently touched objects and surfaces.
Stay home when you are sick, except to get medical care.
Wash your hands often with soap and water for at least 20 seconds.
CDC
For more information: www.cdc.gov/COVID19

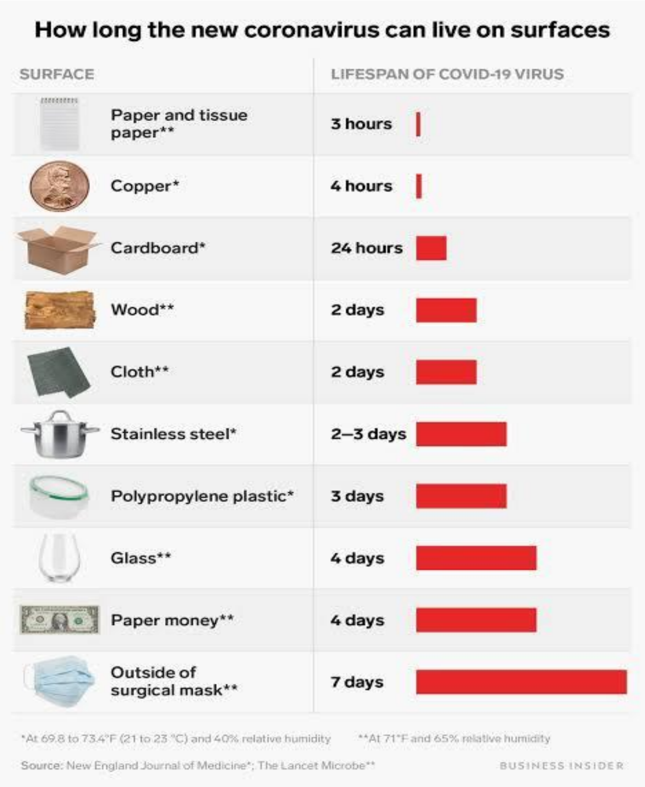
Transmission:

COVID-19 spreads primarily when people are in close contact and one person inhales small droplets produced by an infected person (symptomatic or not) coughing, sneezing, talking, or singing. The WHO recommends 1 metre (3 ft.) of social distance.

People are most infectious when they show symptoms (even mild or non-specific symptoms), but may be infectious for up to two days before symptoms appear (pre-symptomatic transmission).Some studies show it transfers from air and it may also be transmitted when someone touches the infected surface through their hands and touch their eyes, nose or mouth. The droplets get accumulated on the surface of any material.

(Respiratory droplets produced when a man sneezes, visualised using Tyndall scattering) (https://en.m.wikipedia.org/wiki/COVID-19_pandemic#:~:text=Several%20of%20the%20early%20cases,link%20with%20the%20market.)

The lifespan of COVID on different surfaces are:



*At 69.8 to 73.4°F (21 to 23 °C) and 40% relative humidity **At 71°F and 65% relative humidity

Source: New England Journal of Medicine*; The Lancet Microbe**

(https://www.google.com/amp/s/www.businessinsider.com/coronavirus-lifespan-on-surfaces-graphic-2020-3%3famp)

Covid-19 in India:

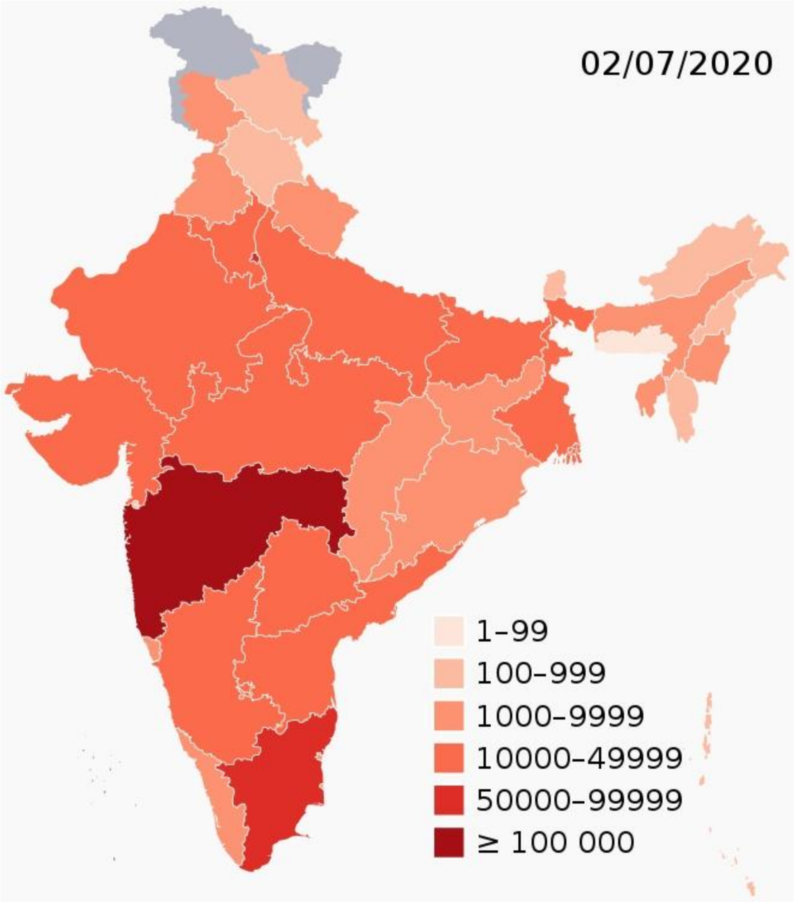
The first case of COVID-19 in India, which originated from China, was reported on 30 January 2020 in Kerala.

The Indian Healthcare system didn't took quick response but later announced this pandemic as medical emergency in the country and the Indian government started to lockdown the country to control the widespread of covid-19.On 22 March, India observed a 14-hour voluntary public curfew at the instance of the Prime Minister Narendra Modi. It was followed by mandatory lockdowns in COVID-19 hotspots and all major cities. Further, on 24 March, the Prime Minister ordered a nationwide lockdown for 21 days, affecting the entire 1.3 billion population of India. On 14 April, the PM extended the nationwide lockdown till 3 May which was followed by two-week extensions starting 3 and 17 May with substantial relaxations. Beginning 1 June the Government has started unlocking the country (barring containment zones) in three unlock phases.

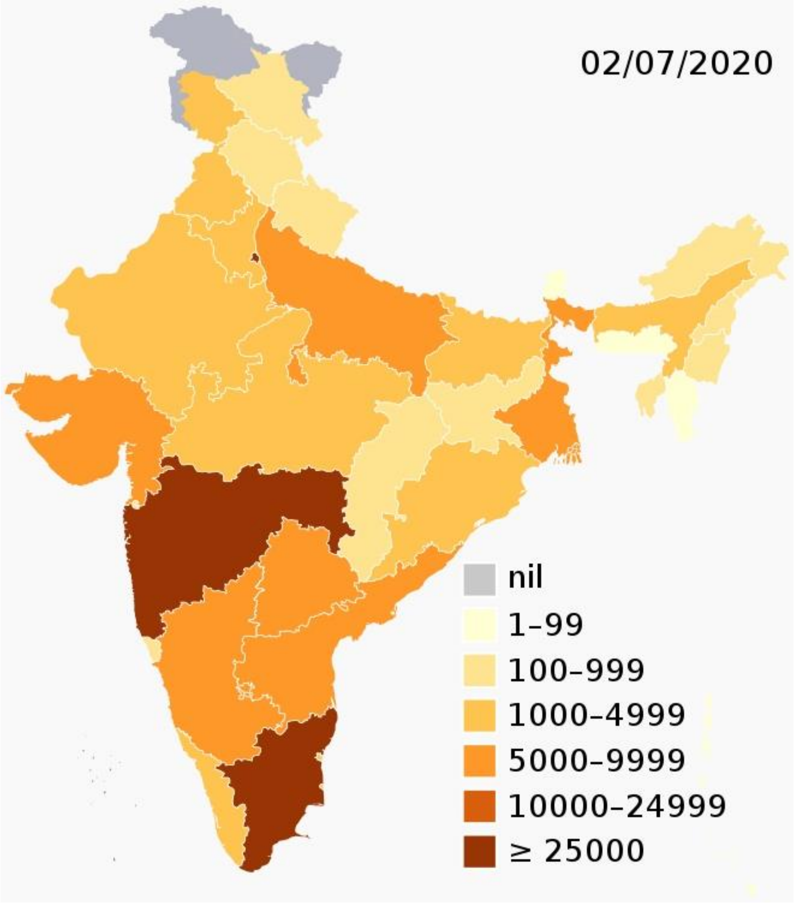
The world health organization praised India for the successful containment of COVID-19 but as the relaxation started the cases began to rise rapidly and quickly.

The fatality rate of India is 2.9% whereas the total Confirmed cases are 604,641 (2 July 2020), Active cases are 226,948 (2 July 2020) and

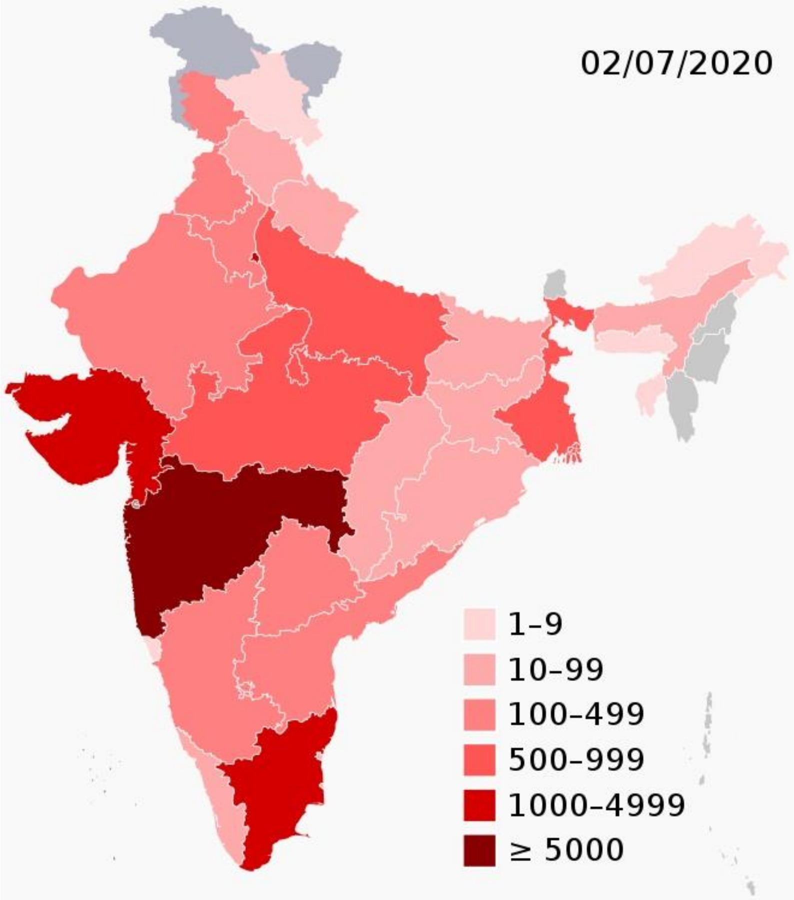
Deaths are 17,834 (2 July 2020)



Map of confirmed cases (as of 2 July 2020)



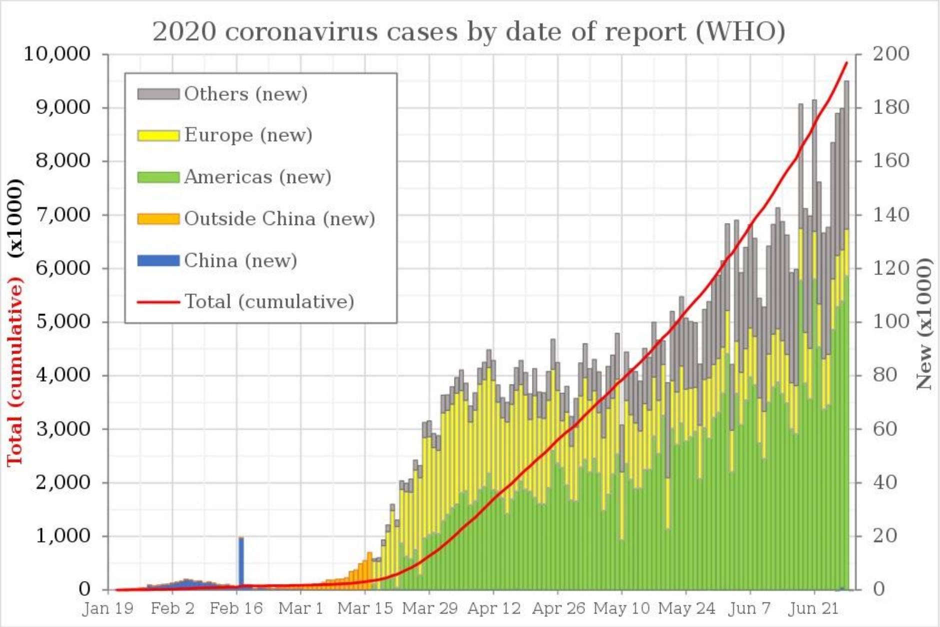
Map of active cases (as of 2 July 2020)



Map of deaths due to the pandemic (as of 2 July 2020)
(https://en.m.wikipedia.org/wiki/COVID-19_pandemic_in_India)

Covid-19 Worldwide:

The total Confirmed cases are 10,694,288 (2 July 2020), Active cases 4,697,684 (2 July 2020), Recovered 5,480,394 (2 July 2020) and Deaths 516,210 (2 July 2020)



(Epidemic curve of COVID-19 by date of report)

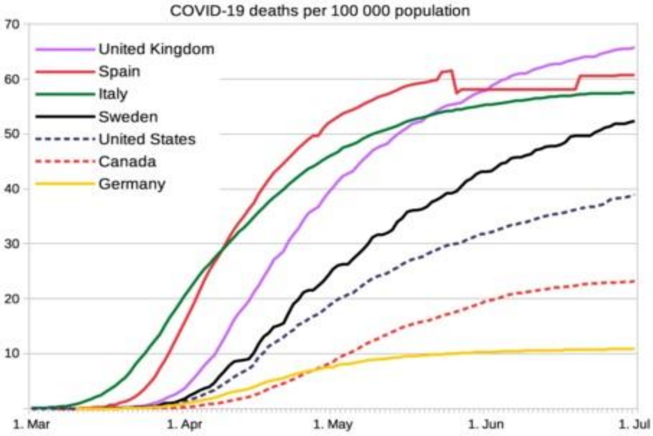
Statistics: (As on 03/07/2020)

S.NO	Location	Cases	Deaths	Recoveries
1.	World	10,874,146	521,355	5,767,410
2.	United States	2,796,092	130,856	856,873
3.	Brazil	1,502,424	62,045	916,147
4.	Russia	667,883	9,859	437,893
5.	India	625,544	18,213	379,891
6.	Peru	292,004	10,045	182,097
7.	Chile	284,541	5,920	249,247
8.	United Kingdom	283,757	43,995	No data
9.	Spain	250,545	28,385	150,376
10.	Italy	240,961	34,818	191,093
11.	Mexico	238,511	29,189	142,593
12.	Iran	235,429	11,260	196,446
13.	Pakistan	221,896	4,551	113,623
14.	Turkey	202,284	5,167	176,965
15.	Saudi Arabia	201,801	1,7802	140,614
16.	Germany	196,793	9,064	180,903
17.	South Africa	168,061	2,844	81,999
18.	France	166,378	29,875	76,549
19.	Bangladesh	156,391	1,968	8,048
20.	Colombia	106,110	3,641	44,531
21.	Canada	104,936	8,644	68,526
22.	Qatar	98,653	121	88,583
23.	China	83,542	4,634	78,499

Deaths:

Most people who contract COVID-19 recover. For those who do not, the time between the onset of symptoms and death usually ranges from 6 to 41 days, typically about 14 days. As of 2 July 2020, approximately 516,000 deaths had been attributed to COVID-19. In China, as of 14 June, about 80 percent of deaths were recorded in those aged over 60, and 75 percent had pre-existing health conditions including cardiovascular diseases and diabetes.

The death-to-case ratio reflects the number of deaths attributed to COVID-19 divided by the number of diagnosed cases within a given time interval. Based on Johns Hopkins University statistics, the global death-to-case ratio is 4.8 percent (516,210 deaths for 10,694,288 cases) as of 2 July 2020.The number varies by region.
Around 60-75% of deaths are due comorbidities.



(COVID-19 deaths per 100 000 population from selected countries)

WHO Guidelines and Recommendations: Doctors point of view
(https://en.m.wikipedia.org/wiki/COVID-19_pandemic#:~:text=Several%20of%20the%20early%20cases,link%20with%20the%20market.)

Immunity Factor:

Immunity is the only shield that is going to protect you against the Covid-19 disease. Taking proper diet and medicinal supplements will help to boost the immune system of human body.
Some of the Immunity boosting agents are:

- Vitamin C (All vitamins preferable)
- Zinc and zinc supplements
- Natural Anti-Virus foods (tulsi leaves, garlic, ginger etc.)
- Turmeric
- Medical Supplements (prescribed by doctor only)
- Apart from this foods take proper sleep about 7-8 hours and also drink plenty of water up to 8-10 glasses.
- Exercise Regularly and Meditation will help to improve the immunity.
- Boosting your immunity not only helps to fight against Covid-19 viruses but also any kind of viruses. So strong immune system will result as a healthy life aspect. Healthy diet is the key to Strong body and a peaceful mind.

(https://www.srlworld.com/blog/foods-increase-immunity-coronavirus-covid-19/)
(https://swachhindia.ndtv.com/album-detail/coronavirus-outbreak-5-foods-items-to-boost-your-immunity-and-safeguard-you-from-infections-98969)

Global Impact of COVID-19:

- Economics
  - The outbreak is a major destabilising threat to the global economy. Agathe Demarais of the Economist Intelligence Unit has forecast that markets will remain volatile until a clearer image emerges on potential outcomes.
  - Tourism is one of the worst affected sectors due to travel bans, closing of public places including travel attractions, and advice of governments against travel.
  - The retail sector has been impacted globally, with reductions in store hours or temporary closures.
  - Hundreds of millions of jobs could be lost globally. More than 40 million Americans lost their jobs and filed unemployment insurance claims. According to a United Nations Economic Commission for Latin America estimate, the pandemic-induced recession could leave 14- 22 million more people in extreme poverty in Latin America than would have been in that situation without the pandemic.

- Supply shortages

The outbreak has been blamed for several instances of supply shortages, stemming from globally increased usage of equipment to fight outbreaks, panic buying (which in several places led to shelves being cleared of grocery essentials such as food, toilet paper, and bottled water), and disruption to factory and logistic operations. The spread of panic buying has been found to stem from perceived threat, perceived scarcity, fear of the unknown, coping behaviour and social psychological factors.

The pandemic has disrupted global food supplies and threatens to trigger a new food crisis. David Beasley, head of the World Food Programme (WFP), said "we could be facing multiple famines of biblical proportions within a short few months."

- Oil and other energy markets

In early February 2020, Organization of the Petroleum Exporting Countries (OPEC) "scrambled" after a steep decline in oil prices due to lower demand from China. On Monday, 20 April, the price of West Texas Intermediate (WTI) went negative and fell to a record low (minus $37.63 a barrel) due to traders' offloading holdings so as not to take delivery and incur storage costs. June prices were down but in the positive range, with a barrel of West Texas trading above $20

- Education

The pandemic has affected educational systems worldwide, leading to the near-total closures of schools, universities and colleges.

School closures impact not only students, teachers, and families. But have far-reaching economic and societal consequences.

In response to school closures, UNESCO recommended the use of distance learning programs.

(https://en.m.wikipedia.org/wiki/COVID-19_pandemic#:~:text=Several%20of%20the%20early%20cases,link%20with%20the%20market.)

CONCLUSION

This pandemic is a tough challenge for Healthcare systems, the government policies and most importantly for the common people. The people are stressed and undergoing panic, which is resulting in improper decision-making. People are losing their jobs every day and there is no guarantee of income these days especially for poor people. Many people in the backward countries are dying due to hunger. The educational institutions are closed. The travel is reduced. All the people have to stay in their homes. This are all the odds about this pandemic but there is also a light, which is trying to overcome this dark time. This pandemic have taught the humans the real care for each other. People are helping each other irrespective of caste, colour or religion. The world is standing united against this tough situation. One more thing that this period is giving us a good family time, which we were missing from so many days. We are strengthening the bond between each other. The Jobs are now offered online and the people are earning their livelihood online. The advancement is seen among the people either it might be learning new things, helping each other or protecting themselves. I conclude by stating that however might be the situation if we stand together nothing can harm us. Although we are going through dark times it wouldn't take much long for the light to enlighten the world again. The sun will shine again and also we will win against this pandemic.

Stay Home. Stay Safe.

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